
Inpatient Quality Indicators (IQI) Parameter Estimates, v2022

Prepared for:

Agency for Healthcare Research and Quality
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5600 Fishers Lane
Rockville, MD 20857
<http://www.qualityindicators.ahrq.gov>

Contract No. HHSA290201800003G

July 2022

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Executive Summary

This document provides statistical parameters associated with Version 2022 Agency for Healthcare Research and Quality (AHRQ) Quality Indicators™ (QI) Inpatient Quality Indicators (IQI). The parameter estimates derived for the AHRQ QI are based on analysis of the 2019 AHRQ Healthcare Cost and Utilization Project (HCUP) State Inpatient Databases (SID).¹

HCUP is a family of healthcare databases and related software tools and products developed through a Federal-State-Industry partnership. HCUP includes the largest collection of longitudinal hospital care data in the United States, with all-payer, encounter-level information beginning in 1988. The SID contain all-payer, encounter-level information on inpatient discharges, including clinical and resource information typically found on a billing record, such as patient demographics, up to 30 *International Classification of Diseases, Tenth Revision, Clinical Modification/Procedural Classification System (ICD-10-CM/PCS)* diagnoses and procedures, length of stay (LOS), expected payer, admission and discharge dates and discharge disposition.

In 2019, the HCUP databases represent more than 97 percent of all annual discharges in the U.S.² The analytic dataset used to generate the risk adjustment regression models in this document consists of the same hospital discharge records that comprise the reference population for Version 2021 of the AHRQ QI software. This reference population file was limited to community hospitals and excludes rehabilitation and long-term acute care (LTAC) hospitals. Information on the type of hospital was obtained by the American Hospital Association (AHA) Annual Survey of Hospitals. AHA defines community hospitals as “all non-Federal, short-term, general, and other specialty hospitals, excluding hospital units of institutions.” Included among community hospitals are specialty hospitals such as obstetrics-gynecology, ear-nose-throat, orthopedic, and pediatric institutions. Also included are public hospitals and academic medical centers.

In 2019, 46 of the SID participants include indicators of the diagnoses being present on admission (POA). Discharges from these 46 participating States are used to develop hospital-level indicators. Edit checks on POA were developed during an HCUP evaluation of POA coding in the 2011 SID at hospitals that were required to report POA to CMS (Centers for Medicare and Medicaid Services, <http://www.hcup-us.ahrq.gov/reports/methods/2015-06.pdf>). The edits identify general patterns of suspect reporting of POA. The edits do not evaluate whether a valid POA value (e.g., Y or N) is appropriate for the specific diagnosis. There are three hospital-level edit checks:

1. Indication that a hospital has POA reported as Y on all diagnoses on all discharges
2. Indication that a hospital has POA reported as missing on all non-Medicare discharges

¹ Healthcare Cost and Utilization Project (HCUP) 2019 State Inpatient Databases (SID). Agency for Healthcare Research and Quality, Rockville, MD.

² The states included in the analysis are Alaska, Arizona, Arkansas, California, Colorado, Delaware, District of Columbia, Florida, Georgia, Hawaii, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maine, Maryland, Massachusetts, Michigan, Minnesota, Mississippi, Missouri, Montana, Nebraska, Nevada, New Jersey, New Mexico, New York, North Carolina, North Dakota, Ohio, Oklahoma, Oregon, Pennsylvania, Rhode Island, South Carolina, South Dakota, Tennessee, Texas, Utah, Vermont, Virginia, Washington, West Virginia, and Wisconsin.

3. Indication that a hospital reported POA as missing on all nonexempt diagnoses for 15 percent or more of discharges. The cut-point of 15 percent was determined by 2 times the standard deviation plus the mean of the percentage for hospitals that are required to report POA to CMS.

This document is devoted to listing covariates and coefficients for risk adjustment regression models. The regression coefficients are used to calculate risk-adjusted rates that account for differences in patient populations across hospitals. IQI 21, IQI 22, and IQI 33 are not risk adjusted, and thus are not presented in this document.³

Covariates that are considered as potential risk adjusters for the hospital-level IQI include sex and age, Major Diagnostic Categories (MDC), 3M All-Payer Refined Diagnosis-Related Group (APR-DRGs)⁴, AHRQ Clinical Classification Software Refined (CCSR), and Risk of Mortality subclass categories, whether they were transferred from another facility, and other indicator-specific risk stratifiers.

Descriptions of some variable categories are provided in the Appendix tables at the end of the document. Every covariate in every model is a binary indicator variable, coded using 0 or 1. The AHRQ QI software user does not need to manipulate or adjust these coefficients; rather this document is intended to make it transparent to the user how the risk adjusted QI rates are calculated.

In addition to the presentation of the covariates for the risk models, this document provides the weights used in the hospital-level composites (IQI 90 and IQI 91).

Additional information on the risk adjustment process and composite indicators may be found in Quality Indicator Empirical Methods, available on the AHRQ QI website.

(<http://www.qualityindicators.ahrq.gov/modules/Default.aspx>)

Acknowledgments

The AHRQ QI program would like to acknowledge the HCUP Partner organizations that participated in the HCUP SID: **Alaska** State Hospital and Nursing Home Association, **Alaska** Department of Health and Social Services, **Arizona** Department of Health Services, **Arkansas** Department of Health, **California** Department of Health Care Access and Information, **Colorado** Hospital Association, **Connecticut** Hospital Association, **Delaware** Division of Public Health, **District of Columbia** Hospital Association, **Florida** Agency for Health Care Administration, **Georgia** Hospital Association, **Hawaii** Laulima Data Alliance, a non-profit subsidiary of the Healthcare Association of Hawaii, **Hawaii** University of Hawaii at Hilo, **Illinois** Department of Public Health, **Indiana** Hospital Association, **Iowa** Hospital Association, **Kansas** Hospital Association, **Kentucky** Cabinet for Health and Family Services, **Louisiana** Department of Health, **Maine** Health Data Organization, **Maryland** Health Services Cost Review Commission, **Massachusetts** Center for Health Information and Analysis, **Michigan** Health & Hospital Association,

³ IQI 34 was retired in v2021 of the software.

⁴ Averill RF, Goldfield N, Hughes JS, Bonazelli J, McCullough EC, Steinbeck BA, Mullin R, Tang AM. All Patient Refined Diagnosis Related Groups (APR-DRGs). Version 20.0. Methodology Overview. Document number GRP-041. Wallingford, CT: 3M Health Information Systems; 2003. Product website:
http://www.3m.com/3M/en_US/company-us/all-3m-products/~/3M-APR-DRG-Software?N=5002385+3293081278&rt=rud.

Minnesota Hospital Association (provides data for Minnesota and North Dakota), **Mississippi** State Department of Health, **Missouri** Hospital Industry Data Institute, **Montana** Hospital Association, **Nebraska** Hospital Association, **Nevada** Department of Health and Human Services, **New Hampshire** Department of Health & Human Services, **New Jersey** Department of Health, **New Mexico** Department of Health, **New York** State Department of Health, **North Carolina** Department of Health and Human Services, **North Dakota** (data provided by the Minnesota Hospital Association), **Ohio** Hospital Association, **Oklahoma** State Department of Health, **Oregon** Association of Hospitals and Health Systems, **Oregon** Office of Health Analytics, **Pennsylvania** Health Care Cost Containment Council, **Rhode Island** Department of Health, **South Carolina** Revenue and Fiscal Affairs Office, **South Dakota** Association of Healthcare Organizations, **Tennessee** Hospital Association, **Texas** Department of State Health Services, **Utah** Department of Health, **Vermont** Association of Hospitals and Health Systems, **Virginia** Health Information, **Washington** State Department of Health, **West Virginia** Department of Health and Human Resources , **Wisconsin** Department of Health Services, **Wyoming** Hospital Association.

Parameter Estimates Tables

Table 1. Risk Adjustment Coefficients for IQI 08 – Esophageal Resection Mortality Rate

Parameter	Label	DF	Estimate	Standard Error	Z-Statistics	Prob Z-Statistics
Intercept	Intercept	1	-3.159580763	0.4487622838	-7.0406557701	<.0001
Age_LT60	Age<60	1	0.4504637203	0.4996936227	0.9014798267	0.3673
Age_60_64	60 <= Age <= 64	1	0.7716463974	0.5217367551	1.4789956619	0.1391
Age_70_74	70 <= Age <= 74	1	0.8230377691	0.5398498100	1.5245680445	0.1274
Age_75_79	75 <= Age <= 79	1	0.3774702013	0.5524239532	0.6832980342	0.4944
Age_80_84	80 <= Age <= 84	1	-0.5250977754	1.2076381011	-0.4348138527	0.6637
Age_85Plus	Age >= 85	1	-0.4073298768	1.1940631617	-0.3411292551	0.7330
MALE	Patient Sex Flag: 1=Male / 0=Female	1	0.3639533090	0.4388016854	0.8294255037	0.4069
Age_LT60_MALE	Age<=60 MALE	1	-1.588316730	0.5806630076	-2.7353502957	0.0062
Age_60_64_MALE	60 <= Age <= 64 MALE	1	-1.288720314	0.5856195827	-2.2006100070	0.0278
Age_70_74_MALE	70 <= Age <= 74 MALE	1	-0.9804177120	0.6052083470	-1.6199672674	0.1052
Age_75_79_MALE	75 <= Age <= 79 MALE	1	-0.4298045109	0.6432512390	-0.6681751776	0.5040
Age_80_84_MALE	80 <= Age <= 84 MALE	1	0.8518123498	1.2658900796	0.6728959832	0.5010
d_DXCCSR_BLD006_123	Coagulation and hemorrhagic disorders	1	0.4517678638	0.2908599516	1.5532143952	0.1204
d_DXCCSR_CIR007_123	Essential hypertension	1	-0.5092021557	0.1708707358	-2.9800430918	0.0029
d_DXCCSR_CIR011_123	Coronary atherosclerosis and other heart disease	1	0.8294113342	0.2132531271	3.8893278867	0.0001
d_DXCCSR_CIR017_123	Cardiac dysrhythmias	1	0.2660048184	0.2055960221	1.2938227872	0.1957
d_DXCCSR_CIR019_123	Heart failure	1	0.5806216201	0.2326623491	2.4955547051	0.0126
d_DXCCSR_CIR026_123	Peripheral and visceral vascular disease	1	0.6327819375	0.2914505392	2.1711469097	0.0299
d_DXCCSR_DIG004_123	Esophageal disorders	1	-0.4441698067	0.1523883843	-2.9147222007	0.0036
d_DXCCSR_DIG006_123	Gastrointestinal and biliary perforation	1	1.4831785298	0.4543498105	3.2643978177	0.0011

Parameter	Label	DF	Estimate	Standard Error	Z-Statistics	Prob Z-Statistics
d_DXCCSR_DIG019_123	Other specified and unspecified liver disease	1	1.0069573719	0.2599651578	3.8734320418	0.0001
d_DXCCSR_END010_123	Disorders of lipid metabolism	1	-0.5746749339	0.2051069633	-2.8018304431	0.0051
d_DXCCSR_END011_123	Fluid and electrolyte disorders	1	0.5196115370	0.2181561937	2.3818326135	0.0172
d_DXCCSR_FAC009_123	Implant, device or graft related encounter	1	-1.158475654	0.2782198924	-4.1638850637	<.0001
d_DXCCSR_GEN002_123	Acute and unspecified renal failure	1	0.4801337600	0.3924962424	1.2232824371	0.2212
d_DXCCSR_GEN003_123	Chronic kidney disease	1	0.6199881939	0.2343480803	2.6455868262	0.0082
d_DXCCSR_INF002_123	Septicemia	1	1.5220146608	0.5620411275	2.7080129661	0.0068
d_IQ08_PRCCSR_GIS004_123	GI system endoscopy without biopsy (diagnostic)	1	-1.034006070	0.2566628509	-4.0286549712	<.0001

c-statistic=0.793

Table 2. Risk Adjustment Coefficients for IQI 09 – Pancreatic Resection Mortality Rate Stratum A: Presence Of Pancreatic Cancer

Parameter	Label	DF	Estimate	Standard Error	Z-Statistics	Prob Z-Statistics
Intercept	Intercept	1	-3.272688123	0.3561629922	-9.1887371639	<.0001
Age_LT60	Age<60	1	-0.4652747210	0.3529337630	-1.3183060669	0.1874
Age_60_64	60 <= Age <= 64	1	-0.1357669657	0.3621367959	-0.3749051939	0.7077
Age_70_74	70 <= Age <= 74	1	0.3977926709	0.3131936614	1.2701172464	0.2040
Age_75_79	75 <= Age <= 79	1	-0.2568532602	0.3977193636	-0.6458153255	0.5184
Age_80_84	80 <= Age <= 84	1	0.2994997638	0.4208348930	0.7116799694	0.4767
Age_85Plus	Age >= 85	1	0.9204131416	0.4666513703	1.9723785253	0.0486
MALE	Patient Sex Flag: 1=Male / 0=Female	1	-0.0846359024	0.3454746834	-0.2449843836	0.8065
Age_LT60_MALE	Age<=60 MALE	1	0.1099227595	0.4805406050	0.2287481189	0.8191
Age_60_64_MALE	60 <= Age <= 64 MALE	1	0.4297775677	0.4910243743	0.8752672784	0.3814

Parameter	Label	DF	Estimate	Standard Error	Z-Statistics	Prob Z-Statistics
Age_70_74_MALE	70 <= Age <= 74 MALE	1	0.3954481522	0.4346667971	0.9097730832	0.3629
Age_75_79_MALE	75 <= Age <= 79 MALE	1	1.0242063072	0.4770102560	2.1471368682	0.0318
Age_80_84_MALE	80 <= Age <= 84 MALE	1	0.4995476980	0.5485226413	0.9107148190	0.3624
Age_85Plus_MALE	Age >= 85 MALE	1	0.1700045259	0.6057002694	0.2806743442	0.7790
MDC_7	Hepatobiliary System And Pancreas	1	-0.4227049377	0.2350013135	-1.7987343617	0.0721
d_DXCCSR_CIR007_123	Essential hypertension	1	-0.5479042186	0.1612483975	-3.3978893879	0.0007
d_DXCCSR_CIR017_123	Cardiac dysrhythmias	1	0.2398265316	0.1869253358	1.2830070928	0.1995
d_DXCCSR_CIR019_123	Heart failure	1	0.5533634413	0.2154535596	2.5683652770	0.0102
d_DXCCSR_DIG004_123	Esophageal disorders	1	-0.2435781491	0.1515727662	-1.6070047090	0.1081
d_DXCCSR_END010_123	Disorders of lipid metabolism	1	-0.2926993793	0.1388170179	-2.1085266331	0.0350
d_DXCCSR_END011_123	Fluid and electrolyte disorders	1	0.8441828696	0.1624331796	5.1971085696	<.0001
d_DXCCSR_FAC009_123	Implant, device or graft related encounter	1	-0.4749807811	0.1925927395	-2.4662444821	0.0137
d_DXCCSR_FAC022_123	Acquired absence of limb or organ	1	-0.4964948475	0.2229727442	-2.2267064490	0.0260
d_DXCCSR_GEN003_123	Chronic kidney disease	1	0.1919062860	0.2103414440	0.9123560360	0.3616
d_DXCCSR_NEO051_123	Endocrine system cancers - pancreas	1	-0.4050742838	0.1697074811	-2.3868970367	0.0170
d_DXCCSR_NEO070_123	Secondary malignancies	1	-0.3084955062	0.1492877339	-2.0664491192	0.0388
d_DXCCSR_RSP008_123	Chronic obstructive pulmonary disease and bronchiectasis	1	0.4092496049	0.1909956942	2.1427163925	0.0321
d_IQ09_PRCCSR_GIS001_123	Esophagogastroduodenoscopy (EGD) with biopsy	1	0.4283483313	0.3659987482	1.1703546349	0.2419
d_IQ09_PRCCSR_GIS007_123	GI system drainage (excluding paracentesis)	1	0.7843132961	0.2918513902	2.6873721433	0.0072
d_IQ09_PRCCSR_GIS011_123	Small bowel resection	1	0.3194844292	0.2194466713	1.4558636377	0.1454
d_IQ09_PRCCSR_GIS012_123	Duodenal resection	1	0.5184560870	0.1817839381	2.8520456337	0.0043
d_IQ09_PRCCSR_GIS019_123	Gastro-jejunal bypass (including	1	0.3028684577	0.2920878379	1.0369088280	0.2998

Parameter	Label	DF	Estimate	Standard Error	Z-Statistics	Prob Z-Statistics
	bariatric)					
d_IQ09_PRCCSR_GIS022_123	GI system lysis of adhesions	1	0.3248969112	0.2303867346	1.4102240381	0.1585
d_IQ09_PRCCSR_GIS025_123	Other GI system device procedures	1	0.4395615114	0.1847265803	2.3795249752	0.0173
d_IQ09_PRCCSR_HEP003_123	Diagnostic ERCP with or without biopsy	1	0.2995506909	0.3864632922	0.7751077449	0.4383
d_IQ09_PRCCSR_HEP006_123	Cholecystectomy	1	-0.4256797491	0.1526902101	-2.7878653695	0.0053
d_IQ09_PRCCSR_HEP008_123	Common bile duct sphincterotomy and stenting	1	0.2573336658	0.3571412856	0.7205374350	0.4712
d_IQ09_PRCCSR_HEP013_123	Hepatobiliary and pancreatic procedures, NEC	1	0.2047311281	0.2465196317	0.8304861024	0.4063

c-statistic=0.751

Table 3. Risk Adjustment Coefficients for IQI 09 – Pancreatic Resection Mortality Rate Stratum B: Absence Of Pancreatic Cancer

Parameter	Label	DF	Estimate	Standard Error	Z-Statistics	Prob Z-Statistics
Intercept	Intercept	1	-4.169069089	0.3436919375	-12.1302498981	<.0001
Age_LT30	Age < 30	1	0.1793765990	0.5351867216	0.3351663853	0.7375
Age_35_39	35 <= Age <= 39	1	0.3172782655	0.5602250053	0.5663407782	0.5712
Age_40_44	40 <= Age <= 44	1	-0.1023792428	0.6445012055	-0.1588503511	0.8738
Age_45_49	45 <= Age <= 49	1	0.1658284111	0.5028105399	0.3298029732	0.7415
Age_50_54	50 <= Age <= 54	1	-0.1072674224	0.5521319214	-0.1942786102	0.8460
Age_55_59	55 <= Age <= 59	1	0.1154058028	0.4515877034	0.2555556803	0.7983
Age_60_64	60 <= Age <= 64	1	0.2970295637	0.4678870378	0.6348317857	0.5255
Age_70_74	70 <= Age <= 74	1	0.6536320358	0.4552798050	1.4356710504	0.1511
Age_75_79	75 <= Age <= 79	1	1.4019970991	0.4130753153	3.3940471559	0.0007
Age_80_84	80 <= Age <= 84	1	0.0571807258	0.8519102306	0.0671205999	0.9465
Age_85Plus	Age >= 85	1	1.7826368118	0.8122668390	2.1946443288	0.0282
MALE	Patient Sex Flag: 1=Male / 0=Female	1	0.9017894954	0.4055360616	2.2236974237	0.0262
Age_LT30_MALE	Age < 30 MALE	1	-0.7367979314	0.7284156637	-1.0115075336	0.3118
Age_35_39_MALE	35 <= Age <= 39 MALE	1	0.0021319674	0.6887196534	0.0030955519	0.9975
Age_40_44_MALE	40 <= Age <= 44 MALE	1	-0.8222379891	0.7973854074	-1.0311675903	0.3025
Age_45_49_MALE	45 <= Age <= 49 MALE	1	-0.1771120446	0.6312326412	-0.2805812517	0.7790
Age_50_54_MALE	50 <= Age <= 54 MALE	1	-0.4474737029	0.7218239986	-0.6199207893	0.5353
Age_55_59_MALE	55 <= Age <= 59 MALE	1	-1.139217299	0.6882576375	-1.6552192622	0.0979
Age_60_64_MALE	60 <= Age <= 64 MALE	1	-0.9141318597	0.6388286975	-1.4309498983	0.1524
Age_70_74_MALE	70 <= Age <= 74 MALE	1	-0.2932184817	0.5420276452	-0.5409659161	0.5885
Age_75_79_MALE	75 <= Age <= 79 MALE	1	-0.7822545870	0.5570739761	-1.4042203021	0.1603
Age_80_84_MALE	80 <= Age <= 84 MALE	1	0.9779666271	0.9573410368	1.0215446633	0.3070

Parameter	Label	DF	Estimate	Standard Error	Z-Statistics	Prob Z-Statistics
Age_85Plus_MALE	Age >= 85 MALE	1	-0.3656332874	1.0132998671	-0.3608342400	0.7182
MDC_5	Circulatory System	1	1.1122993778	0.4425251094	2.5135282818	0.0120
MDC_17	Myeloproliferative DDs	1	-0.6869581049	0.2498379212	-2.7496150366	0.0060
MDC_18	Infectious and Parasitic	1	0.7930128571	0.4040063943	1.9628720443	0.0497
d_DXCCSR_BLD006_123	Coagulation and hemorrhagic disorders	1	0.8146976303	0.1968574716	4.1385151578	<.0001
d_DXCCSR_CIR007_123	Essential hypertension	1	-0.4679939307	0.1813278849	-2.5809264305	0.0099
d_DXCCSR_CIR019_123	Heart failure	1	0.9902262925	0.2295600167	4.3135834651	<.0001
d_DXCCSR_DIG004_123	Esophageal disorders	1	-0.6245897641	0.2607094045	-2.3957316203	0.0166
d_DXCCSR_DIG019_123	Other specified and unspecified liver disease	1	0.7628800801	0.2078762380	3.6698763046	0.0002
d_DXCCSR_DIG020_123	Pancreatic disorders (excluding diabetes)	1	-1.004032568	0.2076261440	-4.8357713949	<.0001
d_DXCCSR_END010_123	Disorders of lipid metabolism	1	-0.7527777663	0.1796486558	-4.1902777562	<.0001
d_DXCCSR_END011_123	Fluid and electrolyte disorders	1	0.3855186882	0.1786548293	2.1578968213	0.0309
d_DXCCSR_GEN002_123	Acute and unspecified renal failure	1	0.5028369243	0.2451800357	2.0508885350	0.0403
d_DXCCSR_INJ010_123	Internal organ injury, initial encounter	1	0.3019766809	0.3454841767	0.8740680508	0.3821
d_DXCCSR_INJ016_123	Injury to blood vessels, initial encounter	1	1.3164543413	0.3076198976	4.2794837116	<.0001
d_DXCCSR_INJ026_123	Other specified injury	1	0.4596948981	0.3468408301	1.3253771132	0.1850
d_DXCCSR_NEO073_123	Benign neoplasms	1	-0.8439445846	0.2285798726	-3.6921211604	0.0002
d_DXCCSR_NVS020_123	Other nervous system disorders (neither hereditary nor degenerative)	1	1.7241607101	0.3408322295	5.0586786135	<.0001
d_DXCCSR_RSP012_123	Respiratory failure; insufficiency; arrest	1	0.1334450736	0.2726862933	0.4893721350	0.6246
d_DXCCSR_SYM003_123	Shock	1	0.5312354640	0.2770210351	1.9176719333	0.0552
d_IQ09_PRCCSR_GIS009_123	Colectomy	1	0.4164724160	0.1882421198	2.2124294846	0.0269
d_IQ09_PRCCSR_GIS011_123	Small bowel resection	1	0.3436958793	0.2015399191	1.7053488998	0.0881

Parameter	Label	DF	Estimate	Standard Error	Z-Statistics	Prob Z-Statistics
d_IQ09_PRCCSR_GIS024_123	Other peritoneal cavity procedures	1	0.2951258723	0.3661966773	0.8059217645	0.4203
d_IQ09_PRCCSR_HEP004_123	Hepatobiliary resection and ablation	1	0.9262944356	0.1750354380	5.2920394091	<.0001
TRNSFER	TRANSFER FROM ANOTHER ACUTE CARE HOSPITAL	1	0.7063456805	0.2384376212	2.9623919125	0.0031

c-statistic=0.872

Table 4. Risk Adjustment Coefficients for IQI 11 – Abdominal Aortic Aneurysm (AAA) Repair Mortality Rate Stratum: Open Repair of Ruptured AAA

Parameter	Label	DF	Estimate	Standard Error	Z-Statistics	Prob Z-Statistics
Intercept	Intercept	1	-0.5561672791	0.4170760992	-1.3334911305	0.1824
Age_LT60	Age<60	1	-0.9763701405	0.6634083524	-1.4717483387	0.1411
Age_60_64	60 <= Age <= 64	1	-0.5652379941	0.6467641523	-0.8739476239	0.3821
Age_70_74	70 <= Age <= 74	1	1.0452702090	0.4879324551	2.1422436612	0.0322
Age_75_79	75 <= Age <= 79	1	0.9188871993	0.4480708486	2.0507631821	0.0403
Age_80_84	80 <= Age <= 84	1	1.8896297194	0.5321279142	3.5510817402	0.0004
Age_85_89	85 <= Age <= 89	1	1.9419265002	0.7215484703	2.6913320172	0.0071
MALE	Patient Sex Flag: 1=Male / 0=Female	1	0.2027209435	0.4303517282	0.4710587416	0.6376
Age_LT60_MALE	Age<=60 MALE	1	0.2404473113	0.7671625385	0.3134242083	0.7540
Age_60_64_MALE	60 <= Age <= 64 MALE	1	0.6400787974	0.6857798328	0.9333590269	0.3506
Age_70_74_MALE	70 <= Age <= 74 MALE	1	-1.093088509	0.5473610676	-1.9970154507	0.0458
Age_75_79_MALE	75 <= Age <= 79 MALE	1	-0.5147950646	0.5263647803	-0.9780195862	0.3281
Age_80_84_MALE	80 <= Age <= 84 MALE	1	-1.631789474	0.6135819863	-2.6594481422	0.0078
Age_85_89_MALE	85 <= Age <= 89 MALE	1	-1.005059183	0.8000683307	-1.2562166814	0.2090
d_DXCCSR_BLD003_123	Aplastic anemia	1	-0.4341382506	0.2800306984	-1.5503237789	0.1211

Parameter	Label	DF	Estimate	Standard Error	Z-Statistics	Prob Z-Statistics
d_DXCCSR_BLD006_123	Coagulation and hemorrhagic disorders	1	0.5080986490	0.1625566691	3.1256708924	0.0018
d_DXCCSR_CIR007_123	Essential hypertension	1	-0.4212650291	0.1758568627	-2.3954995137	0.0166
d_DXCCSR_CIR008_123	Hypertension with complications and secondary hypertension	1	-0.6664426455	0.1904883576	-3.4986004067	0.0005
d_DXCCSR_CIR031_123	Hypotension	1	0.6358474347	0.2217182968	2.8678167021	0.0041
d_DXCCSR_DIG004_123	Esophageal disorders	1	-0.4241715512	0.2310005257	-1.8362363024	0.0663
d_DXCCSR_END008_123	Malnutrition	1	-0.4052370287	0.2548564334	-1.5900600321	0.1118
d_DXCCSR_END010_123	Disorders of lipid metabolism	1	-0.3019530095	0.1419723284	-2.1268441030	0.0334
d_DXCCSR_END011_123	Fluid and electrolyte disorders	1	0.3501653871	0.1420941882	2.4643188547	0.0137
d_DXCCSR_END016_123	Other specified and unspecified nutritional and metabolic disorders	1	-0.7955006559	0.2490392508	-3.1942782251	0.0014
d_DXCCSR_INF003_123	Bacterial infections	1	-0.3852582772	0.2716085079	-1.4184322875	0.1561
d_DXCCSR_MBD024_123	Tobacco-related disorders	1	-0.3600347397	0.1580935375	-2.2773526700	0.0228
d_DXCCSR_SYM003_123	Shock	1	0.5363035159	0.1545741841	3.4695542406	0.0005
d_DXCCSR_SYM017_123	Abnormal findings without diagnosis	1	-0.5522800425	0.2288520693	-2.4132621750	0.0158
d_IQ11_OPEN_PRCCSR_CAR014	Peripheral arterial bypass procedures	1	-0.2962152912	0.1791655747	-1.6533047248	0.0983
d_IQ11_OPEN_PRCCSR_CAR024	Venous and arterial catheter placement	1	0.5685616200	0.1605808876	3.5406556056	0.0004

c-statistic=0.745

Table 5. Risk Adjustment Coefficients for IQI 11 – Abdominal Aortic Aneurysm (AAA) Repair Mortality Rate Stratum: Open Repair of Unruptured AAA

Parameter	Label	DF	Estimate	Standard Error	Z-Statistics	Prob Z-Statistics
Intercept	Intercept	1	-2.478686775	0.5230034347	-4.7393317336	<.0001
Age_LT60	Age<60	1	-0.3558674809	0.5206070330	-0.6835625688	0.4943
Age_60_64	60 <= Age <= 64	1	-0.9182759294	0.5401132933	-1.7001542838	0.0891
Age_70_74	70 <= Age <= 74	1	0.0854330258	0.3777643600	0.2261542774	0.8211
Age_75_79	75 <= Age <= 79	1	0.0254443796	0.4233932617	0.0600963262	0.9521
Age_80_84	80 <= Age <= 84	1	-0.3722900108	0.5530170798	-0.6731980340	0.5008
Age_85Plus	Age >= 85	1	0.6035769416	0.5885863966	1.0254687247	0.3051
MALE	Patient Sex Flag: 1=Male / 0=Female	1	-0.5836969678	0.3535591485	-1.6509174497	0.0988
Age_LT60_MALE	Age<=60 MALE	1	-0.1304552017	0.6412304472	-0.2034451145	0.8388
Age_60_64_MALE	60 <= Age <= 64 MALE	1	1.0113219946	0.6275073003	1.6116497676	0.1070
Age_70_74_MALE	70 <= Age <= 74 MALE	1	0.1708486418	0.4594065302	0.3718898852	0.7100
Age_75_79_MALE	75 <= Age <= 79 MALE	1	0.7521038997	0.4811645745	1.5630907585	0.1180
Age_80_84_MALE	80 <= Age <= 84 MALE	1	0.6550656027	0.6695828350	0.9783189898	0.3279
Age_85Plus_MALE	Age >= 85 MALE	1	0.6421184156	0.7157337947	0.8971469844	0.3696
MDC_5	Circulatory System	1	-0.1365405092	0.4096715497	-0.3332926323	0.7389
d_DXCCSR_BLD006_123	Coagulation and hemorrhagic disorders	1	0.3208824367	0.2524241545	1.2712033731	0.2037
d_DXCCSR_CIR007_123	Essential hypertension	1	-0.5666643164	0.2164675374	-2.6177796591	0.0089
d_DXCCSR_CIR008_123	Hypertension with complications and secondary hypertension	1	-1.039546059	0.2832824479	-3.6696451424	0.0002
d_DXCCSR_CIR011_123	Coronary atherosclerosis and other heart disease	1	0.3729215056	0.1765935918	2.1117499329	0.0347
d_DXCCSR_CIR019_123	Heart failure	1	0.4904124006	0.2285043938	2.1461836797	0.0319
d_DXCCSR_CIR026_123	Peripheral and visceral vascular disease	1	0.1986761629	0.1630724760	1.2183304489	0.2231

Parameter	Label	DF	Estimate	Standard Error	Z-Statistics	Prob Z-Statistics
d_DXCCSR_CIR030_123	Aortic and peripheral arterial embolism or thrombosis	1	-0.3024114119	0.2250209629	-1.3439255082	0.1790
d_DXCCSR_CIR032_123	Other specified and unspecified circulatory disease	1	0.0543083447	0.2796363943	0.1942105741	0.8460
d_DXCCSR_DIG004_123	Esophageal disorders	1	-0.6945596579	0.2046670498	-3.3936076112	0.0007
d_DXCCSR_DIG025_123	Other specified and unspecified gastrointestinal disorders	1	0.4007729627	0.2002662556	2.0012006592	0.0454
d_DXCCSR_END003_123	Diabetes mellitus with complication	1	0.2286307045	0.2675806057	0.8544367554	0.3929
d_DXCCSR_END010_123	Disorders of lipid metabolism	1	-0.6295780579	0.1549870154	-4.0621342138	<.0001
d_DXCCSR_END011_123	Fluid and electrolyte disorders	1	0.2583627938	0.2045919563	1.2628199002	0.2067
d_DXCCSR_FAC009_123	Implant, device or graft related encounter	1	-0.3092119041	0.1916296927	-1.6135907742	0.1066
d_DXCCSR_GEN002_123	Acute and unspecified renal failure	1	0.3005312221	0.2608207942	1.1522517710	0.2492
d_DXCCSR_GEN003_123	Chronic kidney disease	1	0.8363183871	0.2440747011	3.4264853479	0.0006
d_DXCCSR_MBD024_123	Tobacco-related disorders	1	-0.4527891481	0.1929964499	-2.3461009175	0.0190
d_DXCCSR_RSP008_123	Chronic obstructive pulmonary disease and bronchiectasis	1	0.3749575674	0.1527028405	2.4554721190	0.0141
d_IQ11_OPEN_PRCCSR_CAR 007	Embolectomy, endarterectomy, and related vessel procedures (non-endovascular; excluding carotid)	1	0.2728249240	0.1608271043	1.6963864717	0.0898
d_IQ11_OPEN_PRCCSR_CAR 008	Angioplasty and related vessel procedures (endovascular; excluding carotid)	1	0.4802643839	0.3386398844	1.4182156504	0.1561
d_IQ11_OPEN_PRCCSR_CAR 010	Ligation and embolization of vessels	1	0.4474803918	0.3367290169	1.3289035672	0.1839
d_IQ11_OPEN_PRCCSR_CAR 011	Aneurysm repair procedures	1	-0.3163754424	0.2059831733	-1.5359285779	0.1246
d_IQ11_OPEN_PRCCSR_CAR	Peripheral arterial bypass procedures	1	0.5555027074	0.1631446749	3.4049698996	0.0007

Parameter	Label	DF	Estimate	Standard Error	Z-Statistics	Prob Z-Statistics
014						
d_IQ11_OPEN_PRCCSR_CAR 021	Artery, vein, and great vessel procedures, NEC	1	0.2197762871	0.2655638346	0.8275836481	0.4079
d_IQ11_OPEN_PRCCSR_CAR 024	Venous and arterial catheter placement	1	0.5124036641	0.1992535971	2.5716156266	0.0101
d_IQ11_OPEN_PRCCSR_CAR 029	Cardiovascular device procedures, NEC	1	0.5687915352	0.2342241646	2.4284067196	0.0152
TRNSFER	TRANSFER FROM ANOTHER ACUTE CARE HOSPITAL	1	0.6178066849	0.2546903921	2.4257164933	0.0153

c-statistic=0.768

Table 6. Risk Adjustment Coefficients for IQI 11 – Abdominal Aortic Aneurysm (AAA) Repair Mortality Rate Stratum: Endovascular Repair of Ruptured AAA

Parameter	Label	DF	Estimate	Standard Error	Z-Statistics	Prob Z-Statistics
Intercept	Intercept	1	-0.6381990523	0.4644732649	-1.3740275285	0.1694
Age_LT60	Age<60	1	-0.6254917263	0.6268344515	-0.9978579269	0.3183
Age_60_64	60 <= Age <= 64	1	0.0500621572	0.6701386605	0.0747041771	0.9405
Age_70_74	70 <= Age <= 74	1	-0.1797420207	0.4855840511	-0.3701563516	0.7113
Age_75_79	75 <= Age <= 79	1	0.1588587049	0.5001909240	0.3175961364	0.7508
Age_80_84	80 <= Age <= 84	1	0.6609167780	0.4582574454	1.4422390397	0.1492
Age_85_89	85 <= Age <= 89	1	0.5352731967	0.4723033279	1.1333250585	0.2571
Age_90Plus	Age >= 90	1	0.5618930818	0.5238088980	1.0727062559	0.2834
MALE	Patient Sex Flag: 1=Male / 0=Female	1	-0.5774477821	0.4277950751	-1.3498233517	0.1771
Age_LT60_MALE	Age<=60 MALE	1	0.6651330591	0.7460467932	0.8915433524	0.3726
Age_60_64_MALE	60 <= Age <= 64 MALE	1	-0.0752948260	0.7137642600	-0.1054897677	0.9160
Age_70_74_MALE	70 <= Age <= 74 MALE	1	0.6819176318	0.5562902750	1.2258305826	0.2203

Parameter	Label	DF	Estimate	Standard Error	Z-Statistics	Prob Z-Statistics
Age_75_79_MALE	75 <= Age <= 79 MALE	1	0.5420573255	0.5669813236	0.9560408834	0.3391
Age_80_84_MALE	80 <= Age <= 84 MALE	1	-0.0852788065	0.5369607537	-0.1588175783	0.8738
Age_85_89_MALE	85 <= Age <= 89 MALE	1	0.5453440536	0.5411019353	1.0078397765	0.3135
Age_90Plus_MALE	Age >= 90 MALE	1	-0.0545643600	0.6407380900	-0.0851586021	0.9321
d_DXCCSR_BLD003_123	Aplastic anemia	1	-0.3688005289	0.2133611070	-1.7285274440	0.0839
d_DXCCSR_BLD004_123	Acute posthemorrhagic anemia	1	-0.4483989987	0.1674358599	-2.6780344362	0.0074
d_DXCCSR_BLD006_123	Coagulation and hemorrhagic disorders	1	0.3600244916	0.1790599527	2.0106365839	0.0444
d_DXCCSR_CIR007_123	Essential hypertension	1	-0.6900433756	0.1641440885	-4.2038880722	<.0001
d_DXCCSR_CIR008_123	Hypertension with complications and secondary hypertension	1	-0.7194051876	0.1719665261	-4.1834024567	<.0001
d_DXCCSR_CIR029_123	Aortic; peripheral; and visceral artery aneurysms	1	-0.8879817122	0.2784881812	-3.1885795243	0.0014
d_DXCCSR_CIR031_123	Hypotension	1	0.4814387819	0.1882824543	2.5570029019	0.0106
d_DXCCSR_END001_123	Thyroid disorders	1	-0.4861133719	0.2179706079	-2.2301785387	0.0257
d_DXCCSR_END009_123	Obesity	1	-0.2705914709	0.1981365658	-1.3656816440	0.1720
d_DXCCSR_END010_123	Disorders of lipid metabolism	1	-0.1082052984	0.1383779328	-0.7819548696	0.4342
d_DXCCSR_END011_123	Fluid and electrolyte disorders	1	0.2757503797	0.1443068092	1.9108618734	0.0560
d_DXCCSR_GEN002_123	Acute and unspecified renal failure	1	-0.4431141785	0.1694549044	-2.6149386479	0.0089
d_DXCCSR_MBD024_123	Tobacco-related disorders	1	-0.4228172172	0.1576778299	-2.6815261059	0.0073
d_DXCCSR_MUS025_123	Other specified connective tissue disease	1	0.5463682370	0.3123753777	1.7490758745	0.0803
d_DXCCSR_RSP012_123	Respiratory failure; insufficiency; arrest	1	0.6874468987	0.1786550104	3.8479015914	0.0001
d_DXCCSR_SYM003_123	Shock	1	1.1423436622	0.1634740081	6.9879222719	<.0001
d_DXCCSR_SYM017_123	Abnormal findings without diagnosis	1	-0.4278885367	0.2065460492	-2.0716374797	0.0383
d_IQ11_ENDO_PRCCSR_CAR010	Ligation and embolization of vessels	1	0.5334823860	0.2339801724	2.2800324507	0.0226

Parameter	Label	DF	Estimate	Standard Error	Z-Statistics	Prob Z-Statistics
d_IQ11_ENDO_PRCCSR_CAR_012	Vessel repair and replacement	1	0.3586939689	0.2125702813	1.6874135309	0.0915
d_IQ11_ENDO_PRCCSR_CAR_014	Peripheral arterial bypass procedures	1	0.7347210800	0.2447817192	3.0015357456	0.0027
d_IQ11_ENDO_PRCCSR_CAR_024	Venous and arterial catheter placement	1	0.6777395214	0.1564891486	4.3309042663	<.0001
d_IQ11_ENDO_PRCCSR_GIS0_05	Exploration of peritoneal cavity	1	1.6004532789	0.4694269067	3.4093769578	0.0007
d_IQ11_ENDO_PRCCSR_GIS0_24	Other peritoneal cavity procedures	1	1.4104326098	0.3640068261	3.8747421992	0.0001

c-statistic=0.805

Table 7. Risk Adjustment Coefficients for IQI 11 – Abdominal Aortic Aneurysm (AAA) Repair Mortality Rate Stratum: Endovascular Repair of Unruptured AAA

Parameter	Label	DF	Estimate	Standard Error	Z-Statistics	Prob Z-Statistics
Intercept	Intercept	1	-4.233245130	0.4673360432	-9.0582466124	<.0001
Age_60_64	60 <= Age <= 64	1	-0.6273442247	0.7708963081	-0.8137854834	0.4158
Age_70_74	70 <= Age <= 74	1	0.3877795880	0.4063247339	0.9543588063	0.3399
Age_75_79	75 <= Age <= 79	1	0.5077908605	0.3801056217	1.3359204166	0.1816
Age_80_84	80 <= Age <= 84	1	0.2878622071	0.4385582065	0.6563831273	0.5116
Age_85_89	85 <= Age <= 89	1	0.4789123063	0.4798565726	0.9980321904	0.3183
Age_90Plus	Age >= 90	1	0.3781512390	0.4211598053	0.8978806482	0.3692
MALE	Patient Sex Flag: 1=Male / 0=Female	1	-0.6901570792	0.3507141943	-1.9678618388	0.0491
Age_60_64_MALE	60 <= Age <= 64 MALE	1	0.9013714526	0.8487392503	1.0620122167	0.2882
Age_70_74_MALE	70 <= Age <= 74 MALE	1	-0.0280747170	0.4610231818	-0.0608965407	0.9514
Age_75_79_MALE	75 <= Age <= 79 MALE	1	-0.0753892320	0.4480914668	-0.1682451855	0.8664

Parameter	Label	DF	Estimate	Standard Error	Z-Statistics	Prob Z-Statistics
Age_80_84_MALE	80 <= Age <= 84 MALE	1	0.5164634543	0.4990318198	1.0349309079	0.3007
Age_85_89_MALE	85 <= Age <= 89 MALE	1	0.0970621068	0.5764642445	0.1683748953	0.8663
d_DXCCSR_BLD006_123	Coagulation and hemorrhagic disorders	1	0.6030422723	0.2462730938	2.4486729871	0.0143
d_DXCCSR_CIR007_123	Essential hypertension	1	-0.3314487768	0.2138645650	-1.5498068917	0.1212
d_DXCCSR_CIR019_123	Heart failure	1	0.9425494372	0.1746511347	5.3967553017	<.0001
d_DXCCSR_END008_123	Malnutrition	1	0.8240987559	0.2611638775	3.1554852218	0.0016
d_DXCCSR_END010_123	Disorders of lipid metabolism	1	-0.5819640337	0.1439836449	-4.0418759657	<.0001
d_DXCCSR_END011_123	Fluid and electrolyte disorders	1	0.7993994725	0.2097124224	3.8118842138	0.0001
d_DXCCSR_FAC009_123	Implant, device or graft related encounter	1	-0.7235376870	0.1849282051	-3.9125329019	<.0001
d_DXCCSR_GEN002_123	Acute and unspecified renal failure	1	0.5856386567	0.2350645668	2.4913948733	0.0127
d_DXCCSR_GEN003_123	Chronic kidney disease	1	0.5846776015	0.1854037921	3.1535363698	0.0016
d_IQ11_ENDO_PRCCSR_CAR 007	Embolectomy, endarterectomy, and related vessel procedures (non-endovascular; excluding carotid)	1	1.1497183462	0.2591324233	4.4367984973	<.0001
d_IQ11_ENDO_PRCCSR_CAR 008	Angioplasty and related vessel procedures (endovascular; excluding carotid)	1	0.7630762580	0.1543113936	4.9450415811	<.0001
d_IQ11_ENDO_PRCCSR_CAR 010	Ligation and embolization of vessels	1	0.6864727377	0.2788685706	2.4616353731	0.0138
d_IQ11_ENDO_PRCCSR_CAR 011	Aneurysm repair procedures	1	-1.094796274	0.2753906393	-3.9754302365	<.0001
d_IQ11_ENDO_PRCCSR_CAR 012	Vessel repair and replacement	1	0.2173133733	0.2333958582	0.9310935293	0.3518
d_IQ11_ENDO_PRCCSR_CAR 014	Peripheral arterial bypass procedures	1	0.7157551346	0.3032759048	2.3600791332	0.0183
d_IQ11_ENDO_PRCCSR_CAR 024	Venous and arterial catheter placement	1	0.7648975079	0.2173887288	3.5185702218	0.0004

Parameter	Label	DF	Estimate	Standard Error	Z-Statistics	Prob Z-Statistics
TRNSFER	TRANSFER FROM ANOTHER ACUTE CARE HOSPITAL	1	0.6695416097	0.2703009178	2.4770230721	0.0132

c-statistic=0.873

Table 8. Risk Adjustment Coefficients for IQI 12 – Coronary Artery Bypass Graft (CABG) Mortality Rate

Parameter	Label	DF	Estimate	Standard Error	Z-Statistics	Prob Z-Statistics
Intercept	Intercept	1	-2.543966910	0.1261495175	-20.1662833081	<.0001
Age_40_44	40 <= Age <= 44	1	-0.3804636118	0.2559563404	-1.4864394890	0.1372
Age_45_49	45 <= Age <= 49	1	-0.8593155260	0.2446016665	-3.5131221230	0.0004
Age_50_54	50 <= Age <= 54	1	-0.2280481806	0.1575795354	-1.4471941427	0.1478
Age_55_59	55 <= Age <= 59	1	-0.2004310356	0.1294071562	-1.5488404316	0.1214
Age_60_64	60 <= Age <= 64	1	-0.0732373432	0.1044379277	-0.7012523595	0.4831
Age_70_74	70 <= Age <= 74	1	0.2580966550	0.0945730694	2.7290713585	0.0064
Age_75_79	75 <= Age <= 79	1	0.3857741253	0.0981016397	3.9323922267	<.0001
Age_80_84	80 <= Age <= 84	1	0.6664046014	0.1102071024	6.0468389690	<.0001
Age_85_89	85 <= Age <= 89	1	0.7182028874	0.1772876283	4.0510603826	<.0001
Age_90Plus	Age >= 90	1	1.0817287424	0.5053421777	2.1405866959	0.0323
MALE	Patient Sex Flag: 1=Male / 0=Female	1	-0.6183251656	0.0902698913	-6.8497386717	<.0001
Age_40_44_MALE	40 <= Age <= 44 MALE	1	-0.1449080365	0.3367525956	-0.4303100805	0.6670
Age_45_49_MALE	45 <= Age <= 49 MALE	1	0.5514866199	0.2893157441	1.9061756271	0.0566
Age_50_54_MALE	50 <= Age <= 54 MALE	1	-0.0087800226	0.1923656022	-0.0456423731	0.9636
Age_55_59_MALE	55 <= Age <= 59 MALE	1	0.0033377945	0.1546627919	0.0215811083	0.9828
Age_60_64_MALE	60 <= Age <= 64 MALE	1	0.0177798656	0.1308183594	0.1359126174	0.8919
Age_70_74_MALE	70 <= Age <= 74 MALE	1	0.0461863697	0.1155992344	0.3995387157	0.6895
Age_75_79_MALE	75 <= Age <= 79 MALE	1	0.2429503694	0.1165719893	2.0841230463	0.0371

Parameter	Label	DF	Estimate	Standard Error	Z-Statistics	Prob Z-Statistics
Age_80_84_MALE	80 <= Age <= 84 MALE	1	0.1738683012	0.1360805990	1.2776861832	0.2014
Age_85_89_MALE	85 <= Age <= 89 MALE	1	0.3376591289	0.2172274066	1.5544039043	0.1201
Age_90Plus_MALE	Age >= 90 MALE	1	0.6621071868	0.5716242203	1.1582909947	0.2467
d_DXCCSR_BLD003_123	Aplastic anemia	1	0.1033669610	0.0504181494	2.0501934771	0.0403
d_DXCCSR_BLD006_123	Coagulation and hemorrhagic disorders	1	0.2333029492	0.0492441021	4.7376830813	<.0001
d_DXCCSR_CIR001_123	Chronic rheumatic heart disease	1	0.1941476661	0.0564707735	3.4380203089	0.0006
d_DXCCSR_CIR007_123	Essential hypertension	1	-0.4573534635	0.0618590007	-7.3934828961	<.0001
d_DXCCSR_CIR008_123	Hypertension with complications and secondary hypertension	1	-0.3459991748	0.0566975700	-6.1025397496	<.0001
d_DXCCSR_CIR009_123	Acute myocardial infarction	1	0.1813375109	0.0411498918	4.4067554745	<.0001
d_DXCCSR_CIR011_123	Coronary atherosclerosis and other heart disease	1	-0.9448242706	0.0669022105	-14.1224671508	<.0001
d_DXCCSR_CIR014_123	Pulmonary heart disease	1	0.1148148855	0.0567324431	2.0237958976	0.0430
d_DXCCSR_CIR017_123	Cardiac dysrhythmias	1	0.1212116424	0.0391548746	3.0956973696	0.0020
d_DXCCSR_CIR019_123	Heart failure	1	0.3669734346	0.0464592453	7.8988247069	<.0001
d_DXCCSR_CIR026_123	Peripheral and visceral vascular disease	1	0.3109301660	0.0487016891	6.3843815576	<.0001
d_DXCCSR_DIG004_123	Esophageal disorders	1	-0.2595112065	0.0424420044	-6.1144898781	<.0001
d_DXCCSR_END005_123	Diabetes mellitus, Type 2	1	-0.0897830875	0.0361234330	-2.4854527946	0.0129
d_DXCCSR_END010_123	Disorders of lipid metabolism	1	-0.7344214289	0.0387920000	-18.9322909207	<.0001
d_DXCCSR_END011_123	Fluid and electrolyte disorders	1	0.3483248324	0.0447056169	7.7915227856	<.0001
d_DXCCSR_FAC009_123	Implant, device or graft related encounter	1	-0.0720722061	0.0406688509	-1.7721721778	0.0764
d_DXCCSR_GEN002_123	Acute and unspecified renal failure	1	0.0666325750	0.0518249098	1.2857248612	0.1985
d_DXCCSR_GEN003_123	Chronic kidney disease	1	0.5547630596	0.0472504856	11.7408964736	<.0001
d_DXCCSR_NVS016_123	Sleep wake disorders	1	-0.1052282277	0.0500600907	-2.1020382969	0.0355
d_DXCCSR_RSP008_123	Chronic obstructive pulmonary disease	1	0.1539185354	0.0434302601	3.5440389979	0.0004

Parameter	Label	DF	Estimate	Standard Error	Z-Statistics	Prob Z-Statistics
	and bronchiectasis					
d_DXCCSR_RSP012_123	Respiratory failure; insufficiency; arrest	1	0.0238554820	0.0630820374	0.3781660042	0.7053
d_DXCCSR_SYM003_123	Shock	1	0.1149701179	0.0784934493	1.4647097170	0.1430
d_IQ12_PRCCSR_CAR012_123	Vessel repair and replacement	1	1.1580832487	0.0694912831	16.6651585314	<.0001
d_IQ12_PRCCSR_CAR019_123	Septal repair and other therapeutic heart procedures	1	0.8590996265	0.0792811167	10.8361191408	<.0001
d_IQ12_PRCCSR_CAR020_123	Saphenous vein harvest and other therapeutic vessel removal	1	-0.1295328978	0.0540004071	-2.3987392815	0.0165
d_IQ12_PRCCSR_CAR022_123	Heart valve replacement and other valve procedures (non-endovascular)	1	0.4480268326	0.0469661292	9.5393603930	<.0001
d_IQ12_PRCCSR_CAR027_123	Heart assist device procedures	1	1.4727982056	0.2454493096	6.0004169824	<.0001
d_IQ12_PRCCSR_ESA008_123	Open heart cardiopulmonary bypass	1	-0.2471522405	0.0468872263	-5.2712062491	<.0001
d_IQ12_PRCCSR_ESA009_123	Cardiac assistance with balloon pump	1	1.2265066317	0.0473087075	25.9256001212	<.0001
d_IQ12_PRCCSR_ESA010_123	Cardiac assistance with ventricular assist device	1	0.7310012281	0.2587193652	2.8254600404	0.0047
d_IQ12_PRCCSR_RES007_123	Airway intubation	1	0.9330780061	0.0691107012	13.5012087908	<.0001
TRNSFER	TRANSFER FROM ANOTHER ACUTE CARE HOSPITAL	1	0.1272340715	0.0433775957	2.9331748213	0.0034

c-statistic=0.851

Table 9. Risk Adjustment Coefficients for IQI 15 – Acute Myocardial Infarction (AMI) Mortality Rate

Parameter	Label	DF	Estimate	Standard Error	Z-Statistics	Prob Z-Statistics
Intercept	Intercept	1	-2.782849912	0.0471159923	-59.0638077171	<.0001
Age_LT30	Age < 30	1	-1.858023267	0.4561722082	-4.0730742338	<.0001
Age_30_34	30 <= Age <= 34	1	-0.5207796083	0.2274514285	-2.2896299740	0.0220
Age_35_39	35 <= Age <= 39	1	-1.088205526	0.1953780593	-5.5697427329	<.0001

Parameter	Label	DF	Estimate	Standard Error	Z-Statistics	Prob Z-Statistics
Age_40_44	40 <= Age <= 44	1	-1.024171819	0.1382419988	-7.4085431903	<.0001
Age_45_49	45 <= Age <= 49	1	-1.038413788	0.1111227651	-9.3447439526	<.0001
Age_50_54	50 <= Age <= 54	1	-0.7289987184	0.0806704082	-9.0367550490	<.0001
Age_55_59	55 <= Age <= 59	1	-0.4070406185	0.0584105339	-6.9686166367	<.0001
Age_60_64	60 <= Age <= 64	1	-0.1652533312	0.0527822226	-3.1308520726	0.0017
Age_70_74	70 <= Age <= 74	1	0.1825794995	0.0473462122	3.8562641260	0.0001
Age_75_79	75 <= Age <= 79	1	0.3794856753	0.0465656758	8.1494720962	<.0001
Age_80_84	80 <= Age <= 84	1	0.4871384423	0.0474789212	10.2600992234	<.0001
Age_85_89	85 <= Age <= 89	1	0.6121235412	0.0487044282	12.5681290989	<.0001
Age_90Plus	Age >= 90	1	0.5669248131	0.0486557155	11.6517619270	<.0001
MALE	Patient Sex Flag: 1=Male / 0=Female	1	-0.2229076646	0.0446075959	-4.9970786351	<.0001
Age_LT30_MALE	Age < 30 MALE	1	0.4331810505	0.5262247913	0.8231863220	0.4104
Age_30_34_MALE	30 <= Age <= 34 MALE	1	-0.9615430102	0.3149599591	-3.0529055593	0.0023
Age_35_39_MALE	35 <= Age <= 39 MALE	1	-0.2498262028	0.2394995678	-1.0431175519	0.2969
Age_40_44_MALE	40 <= Age <= 44 MALE	1	0.0245026942	0.1658115783	0.1477743260	0.8825
Age_45_49_MALE	45 <= Age <= 49 MALE	1	0.1207860493	0.1298055307	0.9305154303	0.3521
Age_50_54_MALE	50 <= Age <= 54 MALE	1	0.0243473254	0.0946225919	0.2573098553	0.7969
Age_55_59_MALE	55 <= Age <= 59 MALE	1	-0.0828994156	0.0750929491	-1.1039573836	0.2696
Age_60_64_MALE	60 <= Age <= 64 MALE	1	-0.0748460947	0.0663106892	-1.1287183949	0.2590
Age_70_74_MALE	70 <= Age <= 74 MALE	1	0.0876680929	0.0599483622	1.4623934626	0.1436
Age_75_79_MALE	75 <= Age <= 79 MALE	1	0.1877357079	0.0587816662	3.1937799670	0.0014
Age_80_84_MALE	80 <= Age <= 84 MALE	1	0.2826302936	0.0589027880	4.7982498499	<.0001
Age_85_89_MALE	85 <= Age <= 89 MALE	1	0.3177016650	0.0609304325	5.2141705246	<.0001
Age_90Plus_MALE	Age >= 90 MALE	1	0.4472525974	0.0651543471	6.8645089258	<.0001
d_DXCCSR_BLD001_123	Nutritional anemia	1	-0.2644156327	0.0384551511	-6.8759483421	<.0001

Parameter	Label	DF	Estimate	Standard Error	Z-Statistics	Prob Z-Statistics
d_DXCCSR_BLD006_123	Coagulation and hemorrhagic disorders	1	0.3014371788	0.0302751712	9.9565804953	<.0001
d_DXCCSR_CIR003_123	Nonrheumatic and unspecified valve disorders	1	0.1462425274	0.0218914485	6.6803495163	<.0001
d_DXCCSR_CIR007_123	Essential hypertension	1	-0.2018206763	0.0228922671	-8.8161070143	<.0001
d_DXCCSR_CIR011_123	Coronary atherosclerosis and other heart disease	1	-0.4830213599	0.0188946712	-25.5638933566	<.0001
d_DXCCSR_CIR016_123	Conduction disorders	1	0.0894889697	0.0203907605	4.3887019134	<.0001
d_DXCCSR_CIR018_123	Cardiac arrest and ventricular fibrillation	1	1.0613007912	0.0326181254	32.5371485400	<.0001
d_DXCCSR_CIR019_123	Heart failure	1	0.2108329158	0.0200122940	10.5351698453	<.0001
d_DXCCSR_CIR026_123	Peripheral and visceral vascular disease	1	0.2596008381	0.0251515665	10.3214580374	<.0001
d_DXCCSR_CIR031_123	Hypotension	1	0.3836662608	0.0282589820	13.5767898784	<.0001
d_DXCCSR_CIR032_123	Other specified and unspecified circulatory disease	1	0.2268483990	0.0286167601	7.9271167740	<.0001
d_DXCCSR_DIG004_123	Esophageal disorders	1	-0.1648033095	0.0200971318	-8.2003398053	<.0001
d_DXCCSR_DIG018_123	Hepatic failure	1	0.5437355340	0.0415589024	13.0834911955	<.0001
d_DXCCSR_DIG019_123	Other specified and unspecified liver disease	1	0.2056897850	0.0418419996	4.9158689140	<.0001
d_DXCCSR_DIG021_123	Gastrointestinal hemorrhage	1	0.3330636460	0.0452744675	7.3565447450	<.0001
d_DXCCSR_END001_123	Thyroid disorders	1	-0.1510091487	0.0215687246	-7.0013017271	<.0001
d_DXCCSR_END003_123	Diabetes mellitus with complication	1	0.0989854960	0.0288234710	3.4341976326	0.0006
d_DXCCSR_END005_123	Diabetes mellitus, Type 2	1	0.0581115418	0.0253161504	2.2954335847	0.0217
d_DXCCSR_END009_123	Obesity	1	-0.1073612912	0.0221356722	-4.8501482278	<.0001
d_DXCCSR_END010_123	Disorders of lipid metabolism	1	-0.4858380394	0.0172969016	-28.0881542849	<.0001
d_DXCCSR_END011_123	Fluid and electrolyte disorders	1	0.4618490173	0.0171328624	26.9569093172	<.0001
d_DXCCSR_END016_123	Other specified and unspecified nutritional and	1	-0.2408651124	0.0321995406	-7.4803897054	<.0001

Parameter	Label	DF	Estimate	Standard Error	Z-Statistics	Prob Z-Statistics
	metabolic disorders					
d_DXCCSR_FAC022_123	Acquired absence of limb or organ	1	-0.1353105241	0.0262907719	-5.1466927167	<.0001
d_DXCCSR_GEN002_123	Acute and unspecified renal failure	1	0.3438543005	0.0180852923	19.0129246984	<.0001
d_DXCCSR_GEN003_123	Chronic kidney disease	1	0.2433536019	0.0210448593	11.5635651923	<.0001
d_DXCCSR_GEN004_123	Urinary tract infections	1	-0.2456091275	0.0351970546	-6.9781159243	<.0001
d_DXCCSR_GEN012_123	Hyperplasia of prostate	1	-0.3291059392	0.0312095113	-10.5450526371	<.0001
d_DXCCSR_INF002_123	Septicemia	1	0.7330018613	0.0628231371	11.6677054862	<.0001
d_DXCCSR_INF003_123	Bacterial infections	1	-0.3263063832	0.0491598728	-6.6376571925	<.0001
d_DXCCSR_MBD005_123	Anxiety and fear-related disorders	1	-0.1324193142	0.0263941676	-5.0169914986	<.0001
d_DXCCSR_MBD024_123	Tobacco-related disorders	1	-0.2248817058	0.0222098937	-10.1252940925	<.0001
d_DXCCSR_MUS006_123	Osteoarthritis	1	-0.1451431571	0.0288743886	-5.0267092854	<.0001
d_DXCCSR_NVS009_123	Epilepsy; convulsions	1	0.3173449625	0.0421124025	7.5356651100	<.0001
d_DXCCSR_NVS013_123	Coma; stupor; and brain damage	1	1.3987562797	0.0446620561	31.3186718487	<.0001
d_DXCCSR_NVS016_123	Sleep wake disorders	1	-0.2386072855	0.0272835215	-8.7454724607	<.0001
d_DXCCSR_NVS019_123	Nervous system pain and pain syndromes	1	-0.2036727723	0.0359760206	-5.6613480052	<.0001
d_DXCCSR_NVS020_123	Other nervous system disorders (neither hereditary nor degenerative)	1	0.1649573091	0.0251406423	6.5613800722	<.0001
d_DXCCSR_RSP010_123	Aspiration pneumonitis	1	-0.3601544257	0.0472655869	-7.6198022510	<.0001
d_DXCCSR_RSP012_123	Respiratory failure; insufficiency; arrest	1	0.7647164963	0.0197489017	38.7219758433	<.0001
d_DXCCSR_RSP016_123	Other specified and unspecified lower respiratory disease	1	0.3616639008	0.0355779977	10.1653809849	<.0001
d_DXCCSR_SYM003_123	Shock	1	1.4583472037	0.0233423080	62.4765641397	<.0001
d_DXCCSR_SYM010_123	Nervous system signs and symptoms	1	0.2955020485	0.0365058517	8.0946487950	<.0001
d_DXCCSR_SYM016_123	Other general signs and symptoms	1	0.1714785861	0.0326855656	5.2463092880	<.0001
d_DXCCSR_SYM017_123	Abnormal findings without diagnosis	1	-0.1923110451	0.0257962340	-7.4550046748	<.0001

Parameter	Label	DF	Estimate	Standard Error	Z-Statistics	Prob Z-Statistics
TRNSFER	TRANSFER FROM ANOTHER ACUTE CARE HOSPITAL	1	0.1789500713	0.0243224494	7.3574033792	<.0001
DNR	Do not resuscitate flag	1	0.8494694821	0.0235280221	36.1045853596	<.0001
MRTAMINSTD	Non-STEMI AMI	1	-0.8131986147	0.0176831904	-45.9870983259	<.0001

c-statistic=0.885

Table 10. Risk Adjustment Coefficients for IQI 16 – Heart Failure Morality Rate

Parameter	Label	DF	Estimate	Standard Error	Z-Statistics	Prob Z-Statistics
Intercept	Intercept	1	-4.456324844	0.0536668093	-83.0368881505	<.0001
Age_LT30	Age < 30	1	-0.7078823517	0.1990560168	-3.5561967083	0.0004
Age_30_34	30 <= Age <= 34	1	-0.3542192456	0.1537402793	-2.3040106804	0.0212
Age_35_39	35 <= Age <= 39	1	-0.5643565733	0.1473710026	-3.8294953791	0.0001
Age_40_44	40 <= Age <= 44	1	-0.5429519618	0.1174899811	-4.6212618008	<.0001
Age_45_49	45 <= Age <= 49	1	-0.5408553593	0.1003522863	-5.3895668889	<.0001
Age_50_54	50 <= Age <= 54	1	-0.2586685866	0.0734708187	-3.5206983032	0.0004
Age_55_59	55 <= Age <= 59	1	-0.2205356279	0.0630722796	-3.4965539421	0.0005
Age_60_64	60 <= Age <= 64	1	-0.0314453055	0.0514603213	-0.6110592533	0.5412
Age_70_74	70 <= Age <= 74	1	0.2151592461	0.0436839413	4.9253624951	<.0001
Age_75_79	75 <= Age <= 79	1	0.2860862678	0.0422990096	6.7634271031	<.0001
Age_80_84	80 <= Age <= 84	1	0.3778874651	0.0414106019	9.1253796745	<.0001
Age_85_89	85 <= Age <= 89	1	0.3779908504	0.0414044867	9.1292244117	<.0001
Age_90Plus	Age >= 90	1	0.4330770646	0.0415233629	10.4297203778	<.0001
MALE	Patient Sex Flag: 1=Male / 0=Female	1	0.1290145588	0.0439067532	2.9383762045	0.0033
Age_LT30_MALE	Age < 30 MALE	1	0.1718055441	0.2421282133	0.7095643329	0.4780
Age_30_34_MALE	30 <= Age <= 34 MALE	1	-0.2868284473	0.2036158318	-1.4086745847	0.1589

Parameter	Label	DF	Estimate	Standard Error	Z-Statistics	Prob Z-Statistics
Age_35_39_MALE	35 <= Age <= 39 MALE	1	-0.2079203957	0.1842649266	-1.1283774915	0.2592
Age_40_44_MALE	40 <= Age <= 44 MALE	1	-0.0619263588	0.1505443398	-0.4113496318	0.6808
Age_45_49_MALE	45 <= Age <= 49 MALE	1	-0.1245032002	0.1242796601	-1.0017986857	0.3164
Age_50_54_MALE	50 <= Age <= 54 MALE	1	-0.2569091190	0.0978486652	-2.6255761221	0.0087
Age_55_59_MALE	55 <= Age <= 59 MALE	1	-0.1515762759	0.0794798296	-1.9071036852	0.0565
Age_60_64_MALE	60 <= Age <= 64 MALE	1	-0.1631132517	0.0661449687	-2.4659963539	0.0137
Age_70_74_MALE	70 <= Age <= 74 MALE	1	0.0210831351	0.0580265874	0.3633357745	0.7164
Age_75_79_MALE	75 <= Age <= 79 MALE	1	0.0879156888	0.0553388912	1.5886781760	0.1121
Age_80_84_MALE	80 <= Age <= 84 MALE	1	0.1097333583	0.0547000731	2.0060916214	0.0448
Age_85_89_MALE	85 <= Age <= 89 MALE	1	0.1312150669	0.0538628728	2.4360948496	0.0148
Age_90Plus_MALE	Age >= 90 MALE	1	0.1179088524	0.0543349470	2.1700371292	0.0300
d_DXCCSR_BLD001_123	Nutritional anemia	1	-0.2733733547	0.0240019968	-11.3896088270	<.0001
d_DXCCSR_BLD003_123	Aplastic anemia	1	-0.1328455038	0.0155570490	-8.5392482774	<.0001
d_DXCCSR_BLD006_123	Coagulation and hemorrhagic disorders	1	0.3171864566	0.0212312458	14.9396064205	<.0001
d_DXCCSR_CIR008_123	Hypertension with complications and secondary hypertension	1	-0.3185377016	0.0260337792	-12.2355536119	<.0001
d_DXCCSR_CIR009_123	Acute myocardial infarction	1	0.4421587339	0.0223526461	19.7810465890	<.0001
d_DXCCSR_CIR014_123	Pulmonary heart disease	1	0.0720827323	0.0161435312	4.4651155477	<.0001
d_DXCCSR_CIR016_123	Conduction disorders	1	-0.1130289348	0.0176709076	-6.3963287868	<.0001
d_DXCCSR_CIR017_123	Cardiac dysrhythmias	1	0.1045793629	0.0144963864	7.2141677486	<.0001
d_DXCCSR_CIR018_123	Cardiac arrest and ventricular fibrillation	1	2.6448104414	0.0542906060	48.7158025682	<.0001
d_DXCCSR_CIR026_123	Peripheral and visceral vascular disease	1	0.0794421893	0.0232726337	3.4135453051	0.0006

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Parameter	Label	DF	Estimate	Standard Error	Z-Statistics	Prob Z-Statistics
d_DXCCSR_CIR031_123	Hypotension	1	0.5067301658	0.0236535438	21.4230125194	<.0001
d_DXCCSR_CIR032_123	Other specified and unspecified circulatory disease	1	0.1468041751	0.0255812673	5.7387373903	<.0001
d_DXCCSR_DIG004_123	Esophageal disorders	1	-0.1322439692	0.0167536181	-7.8934572995	<.0001
d_DXCCSR_DIG018_123	Hepatic failure	1	0.8087900888	0.0436991622	18.5081371886	<.0001
d_DXCCSR_DIG019_123	Other specified and unspecified liver disease	1	0.1647277607	0.0265469979	6.2051370738	<.0001
d_DXCCSR_DIG025_123	Other specified and unspecified gastrointestinal disorders	1	-0.1107629584	0.0294989889	-3.7548052481	0.0002
d_DXCCSR_END005_123	Diabetes mellitus, Type 2	1	-0.1427110106	0.0152816995	-9.3386871113	<.0001
d_DXCCSR_END008_123	Malnutrition	1	0.4694417668	0.0253201115	18.5402725071	<.0001
d_DXCCSR_END009_123	Obesity	1	-0.1333975772	0.0175655992	-7.5942514411	<.0001
d_DXCCSR_END010_123	Disorders of lipid metabolism	1	-0.2743866513	0.0158045370	-17.3612584648	<.0001
d_DXCCSR_END011_123	Fluid and electrolyte disorders	1	0.3508608337	0.0147817388	23.7361001823	<.0001
d_DXCCSR_END016_123	Other specified and unspecified nutritional and metabolic disorders	1	-0.1395239875	0.0232275197	-6.0068396921	<.0001
d_DXCCSR_FAC009_123	Implant, device or graft related encounter	1	-0.2025901628	0.0159220715	-12.7238570864	<.0001
d_DXCCSR_FAC022_123	Acquired absence of limb or organ	1	-0.3042501820	0.0229063410	-13.2823562446	<.0001
d_DXCCSR_GEN002_123	Acute and unspecified renal failure	1	0.4865824446	0.0159222517	30.5599015073	<.0001
d_DXCCSR_GEN003_123	Chronic kidney disease	1	0.2796640338	0.0152843368	18.2974268213	<.0001
d_DXCCSR_GEN012_123	Hyperplasia of prostate	1	-0.2650525810	0.0241818465	-10.9608081920	<.0001
d_DXCCSR_INF003_123	Bacterial infections	1	0.1066881815	0.0236450348	4.5120754585	<.0001
d_DXCCSR_INJ028_123	Adverse effects of drugs and medicaments, initial encounter	1	-0.3523906025	0.0345649137	-10.1950378215	<.0001

Parameter	Label	DF	Estimate	Standard Error	Z-Statistics	Prob Z-Statistics
d_DXCCSR_MBD002_123	Depressive disorders	1	-0.1444482690	0.0216308723	-6.6778753582	<.0001
d_DXCCSR_MBD024_123	Tobacco-related disorders	1	-0.4566448359	0.0268996917	-16.9758389928	<.0001
d_DXCCSR_MUS006_123	Osteoarthritis	1	-0.1474886728	0.0242596430	-6.0795895711	<.0001
d_DXCCSR_MUS033_123	Gout	1	-0.1384551028	0.0261068406	-5.3034032345	<.0001
d_DXCCSR_NVS011_123	Neurocognitive disorders	1	0.0302375282	0.0207557195	1.4568287143	0.1452
d_DXCCSR_NVS015_123	Polyneuropathies	1	-0.0603303259	0.0274834144	-2.1951539632	0.0282
d_DXCCSR_NVS016_123	Sleep wake disorders	1	-0.2454017171	0.0194607790	-12.6100664886	<.0001
d_DXCCSR_NVS019_123	Nervous system pain and pain syndromes	1	-0.2026707603	0.0293363480	-6.9085204538	<.0001
d_DXCCSR_NVS020_123	Other nervous system disorders (neither hereditary nor degenerative)	1	0.4971812128	0.0202100033	24.6007486758	<.0001
d_DXCCSR_RSP002_123	Pneumonia (except that caused by tuberculosis)	1	0.3099018675	0.0183507047	16.8877366515	<.0001
d_DXCCSR_RSP011_123	Pleurisy, pleural effusion and pulmonary collapse	1	0.1994842069	0.0202857057	9.8337326641	<.0001
d_DXCCSR_RSP012_123	Respiratory failure; insufficiency; arrest	1	0.4232951001	0.0180231672	23.4861661350	<.0001
d_DXCCSR_RSP016_123	Other specified and unspecified lower respiratory disease	1	0.1788345965	0.0286550400	6.2409473672	<.0001
d_DXCCSR_SKN001_123	Skin and subcutaneous tissue infections	1	0.1434381744	0.0325351070	4.4087199206	<.0001
d_DXCCSR_SKN003_123	Pressure ulcer of skin	1	0.4704389353	0.0318904050	14.7517391069	<.0001
d_DXCCSR_SKN004_123	Non-pressure ulcer of skin	1	0.0664820010	0.0384220913	1.7303066751	0.0836
d_DXCCSR_SYM003_123	Shock	1	1.5178051842	0.0328771765	46.1659225492	<.0001
d_DXCCSR_SYM005_123	Dysphagia	1	0.2780471153	0.0334071161	8.3229906602	<.0001
d_DXCCSR_SYM006_123	Abdominal pain and other digestive/abdomen signs and symptoms	1	0.2944154616	0.0251478525	11.7073798315	<.0001
d_DXCCSR_SYM010_123	Nervous system signs and symptoms	1	0.1902839434	0.0329297202	5.7784864954	<.0001

Parameter	Label	DF	Estimate	Standard Error	Z-Statistics	Prob Z-Statistics
d_DXCCSR_SYM011_123	Genitourinary signs and symptoms	1	-0.1025965080	0.0327923366	-3.1286733002	0.0018
d_DXCCSR_SYM012_123	Circulatory signs and symptoms	1	-0.1068193800	0.0336609617	-3.1733906131	0.0015
d_DXCCSR_SYM013_123	Respiratory signs and symptoms	1	-0.2988564306	0.0296447249	-10.0812684848	<.0001
d_DXCCSR_SYM016_123	Other general signs and symptoms	1	0.3853665695	0.0311948478	12.3535326231	<.0001
d_DXCCSR_SYM017_123	Abnormal findings without diagnosis	1	-0.1198949220	0.0207168777	-5.7873065594	<.0001
TRNSFER	TRANSFER FROM ANOTHER ACUTE CARE HOSPITAL	1	0.4719575923	0.0581300812	8.1189907653	<.0001
DNR	Do not resuscitate flag	1	0.9395172397	0.0247728081	37.9253428165	<.0001

c-statistic=0.811

Table 11. Risk Adjustment Coefficients for IQI 17 – Acute Stroke Mortality Rate Stratum: Subarachnoid Hemorrhage

Parameter	Label	DF	Estimate	Standard Error	Z-Statistics	Prob Z-Statistics
Intercept	Intercept	1	-2.593131476	0.1059269363	-24.4803783388	<.0001
Age_LT30	Age < 30	1	-0.6313655682	0.2355923057	-2.6799074205	0.0074
Age_30_34	30 <= Age <= 34	1	-0.5147187401	0.2237448489	-2.3004719110	0.0214
Age_35_39	35 <= Age <= 39	1	-0.5378955274	0.1602541347	-3.3565157514	0.0008
Age_40_44	40 <= Age <= 44	1	-0.6582244035	0.1527873955	-4.3081067087	<.0001
Age_45_49	45 <= Age <= 49	1	-0.4000031783	0.1310643579	-3.0519600042	0.0023
Age_50_54	50 <= Age <= 54	1	-0.4102029167	0.1202189470	-3.4121320055	0.0006
Age_55_59	55 <= Age <= 59	1	-0.2528112122	0.1075587931	-2.3504467186	0.0188
Age_60_64	60 <= Age <= 64	1	-0.2381737994	0.1090025841	-2.1850289283	0.0289
Age_70_74	70 <= Age <= 74	1	0.1585164337	0.1124654757	1.4094675078	0.1587
Age_75_79	75 <= Age <= 79	1	0.3213866620	0.1172507706	2.7410196135	0.0061
Age_80_84	80 <= Age <= 84	1	0.4356632310	0.1285671447	3.3886047008	0.0007
Age_85_89	85 <= Age <= 89	1	0.5011009298	0.1464302217	3.4221141246	0.0006

Parameter	Label	DF	Estimate	Standard Error	Z-Statistics	Prob Z-Statistics
Age_90Plus	Age >= 90	1	0.5323145069	0.1755975579	3.0314459561	0.0024
MALE	Patient Sex Flag: 1=Male / 0=Female	1	-0.1864228908	0.1297386331	-1.4369111681	0.1507
Age_LT30_MALE	Age < 30 MALE	1	0.1530023783	0.3009745048	0.5083566079	0.6112
Age_30_34_MALE	30 <= Age <= 34 MALE	1	0.3599020539	0.2942783483	1.2229987559	0.2213
Age_35_39_MALE	35 <= Age <= 39 MALE	1	0.2072804182	0.2631382549	0.7877243778	0.4309
Age_40_44_MALE	40 <= Age <= 44 MALE	1	0.4043249060	0.2362561932	1.7113833104	0.0870
Age_45_49_MALE	45 <= Age <= 49 MALE	1	0.2160293204	0.1879430042	1.1494406044	0.2504
Age_50_54_MALE	50 <= Age <= 54 MALE	1	0.2262959992	0.1980379320	1.1426901752	0.2532
Age_55_59_MALE	55 <= Age <= 59 MALE	1	0.1311619917	0.1738379542	0.7545072210	0.4505
Age_60_64_MALE	60 <= Age <= 64 MALE	1	0.2284160499	0.1754629518	1.3017907627	0.1930
Age_70_74_MALE	70 <= Age <= 74 MALE	1	0.2530469732	0.1801617224	1.4045545851	0.1602
Age_75_79_MALE	75 <= Age <= 79 MALE	1	0.2920375948	0.1903091237	1.5345433213	0.1249
Age_80_84_MALE	80 <= Age <= 84 MALE	1	-0.0611075937	0.2152559863	-0.2838833650	0.7765
Age_85_89_MALE	85 <= Age <= 89 MALE	1	-0.2083569987	0.2403024192	-0.8670615943	0.3859
Age_90Plus_MALE	Age >= 90 MALE	1	-0.1727632109	0.3134477734	-0.5511706434	0.5815
d_DXCCSR_BLD003_123	Aplastic anemia	1	-0.1682669881	0.0700489551	-2.4021341631	0.0163
d_DXCCSR_BLD006_123	Coagulation and hemorrhagic disorders	1	0.1953087134	0.0770299891	2.5354893032	0.0112
d_DXCCSR_CIR007_123	Essential hypertension	1	-0.1997141164	0.0482190305	-4.1418111125	<.0001
d_DXCCSR_CIR008_123	Hypertension with complications and secondary hypertension	1	-0.2131296987	0.0575233685	-3.7050976738	0.0002
d_DXCCSR_CIR009_123	Acute myocardial infarction	1	0.2543201840	0.1195257654	2.1277436148	0.0334
d_DXCCSR_CIR011_123	Coronary atherosclerosis and other heart disease	1	0.1107492928	0.0615267919	1.8000173485	0.0719
d_DXCCSR_CIR015_123	Other and ill-defined heart disease	1	-0.4053482253	0.1435238273	-2.8242573588	0.0047
d_DXCCSR_CIR017_123	Cardiac dysrhythmias	1	0.2551655649	0.0660387165	3.8638783195	0.0001

Parameter	Label	DF	Estimate	Standard Error	Z-Statistics	Prob Z-Statistics
d_DXCCSR_CIR023_123	Occlusion or stenosis of precerebral or cerebral arteries without infarction	1	-0.3519171785	0.1081971539	-3.2525548571	0.0011
d_DXCCSR_CIR024_123	Other and ill-defined cerebrovascular disease	1	-0.3765885106	0.0625122429	-6.0242361069	<.0001
d_DXCCSR_CIR031_123	Hypotension	1	0.7839589478	0.0989355128	7.9239387933	<.0001
d_DXCCSR_DIG004_123	Esophageal disorders	1	-0.2419126487	0.0708343118	-3.4151902181	0.0006
d_DXCCSR_DIG019_123	Other specified and unspecified liver disease	1	0.5123040755	0.1371432775	3.7355390998	0.0002
d_DXCCSR_END001_123	Thyroid disorders	1	-0.1664760370	0.0686439076	-2.4252121255	0.0153
d_DXCCSR_END008_123	Malnutrition	1	-0.5604062006	0.1143129910	-4.9023841966	<.0001
d_DXCCSR_END009_123	Obesity	1	-0.1900403489	0.0690361732	-2.7527648201	0.0059
d_DXCCSR_END010_123	Disorders of lipid metabolism	1	-0.2257437088	0.0464536998	-4.8595420713	<.0001
d_DXCCSR_END013_123	Pituitary disorders	1	0.5720438347	0.1320685453	4.3314161841	<.0001
d_DXCCSR_END016_123	Other specified and unspecified nutritional and metabolic disorders	1	-0.2692280606	0.0820271934	-3.2821805735	0.0010
d_DXCCSR_EYE012_123	Other specified eye disorders	1	0.6902082117	0.1498584877	4.6057331989	<.0001
d_DXCCSR_FAC022_123	Acquired absence of limb or organ	1	-0.2052540680	0.0868698946	-2.3627756074	0.0181
d_DXCCSR_GEN002_123	Acute and unspecified renal failure	1	0.2737385138	0.0771570951	3.5478074121	0.0004
d_DXCCSR_GEN003_123	Chronic kidney disease	1	0.3280138783	0.0868124543	3.7784195919	0.0002
d_DXCCSR_GEN004_123	Urinary tract infections	1	-0.8314022520	0.1215887047	-6.8378247291	<.0001
d_DXCCSR_INF003_123	Bacterial infections	1	-0.2829735593	0.1114208625	-2.5396820042	0.0111
d_DXCCSR_MBD002_123	Depressive disorders	1	-0.4107065448	0.0872925069	-4.7049461543	<.0001
d_DXCCSR_MBD005_123	Anxiety and fear-related disorders	1	-0.1734855490	0.0855765307	-2.0272561592	0.0426
d_DXCCSR_MBD024_123	Tobacco-related disorders	1	-0.1158648341	0.0572490985	-2.0238717675	0.0430
d_DXCCSR_NVS008_123	Paralysis (other than cerebral palsy)	1	-0.2702624835	0.0727859969	-3.7131109669	0.0002
d_DXCCSR_NVS009_123	Epilepsy; convulsions	1	-0.1645273701	0.0653099009	-2.5191796005	0.0118

Parameter	Label	DF	Estimate	Standard Error	Z-Statistics	Prob Z-Statistics
d_DXCCSR_NVS010_123	Headache; including migraine	1	-0.7392484454	0.0956797543	-7.7262786754	<.0001
d_DXCCSR_NVS011_123	Neurocognitive disorders	1	-0.5757691496	0.1074533078	-5.3583194568	<.0001
d_DXCCSR_NVS013_123	Coma; stupor; and brain damage	1	1.7505789767	0.0934995103	18.7228678591	<.0001
d_DXCCSR_NVS016_123	Sleep wake disorders	1	-0.3949733516	0.0911972735	-4.3309776336	<.0001
d_DXCCSR_NVS020_123	Other nervous system disorders (neither hereditary nor degenerative)	1	0.8840953117	0.0544063228	16.2498633707	<.0001
d_DXCCSR_RSP002_123	Pneumonia (except that caused by tuberculosis)	1	-0.1435243706	0.1312073176	-1.0938747417	0.2740
d_DXCCSR_RSP012_123	Respiratory failure; insufficiency; arrest	1	1.7298943334	0.0500468518	34.5654975620	<.0001
d_DXCCSR_RSP016_123	Other specified and unspecified lower respiratory disease	1	-0.2387382590	0.1355233447	-1.7616024721	0.0781
d_DXCCSR_SYM003_123	Shock	1	1.4323100943	0.1078981804	13.2746454902	<.0001
d_DXCCSR_SYM005_123	Dysphagia	1	-1.233172718	0.1253915052	-9.8345794299	<.0001
d_DXCCSR_SYM010_123	Nervous system signs and symptoms	1	0.3509402360	0.0494517717	7.0966160330	<.0001
d_DXCCSR_SYM012_123	Circulatory signs and symptoms	1	0.1867361065	0.0880682517	2.1203566890	0.0340
DNR	Do not resuscitate flag	1	1.7195917546	0.0791155404	21.7351957040	<.0001

c-statistic=0.875

Table 12. Risk Adjustment Coefficients for IQI 17 – Acute Stroke Mortality Rate Stratum: Intracerebral Hemorrhage

Parameter	Label	DF	Estimate	Standard Error	Z-Statistics	Prob Z-Statistics
Intercept	Intercept	1	-2.508537436	0.0683197687	-36.7175926125	<.0001
Age_LT30	Age < 30	1	-0.5291886340	0.1452685856	-3.6428291202	0.0003
Age_30_34	30 <= Age <= 34	1	-0.1720758160	0.1633858389	-1.0531868436	0.2923
Age_35_39	35 <= Age <= 39	1	-0.4231454918	0.1353075870	-3.1272857735	0.0018
Age_40_44	40 <= Age <= 44	1	-0.0509598362	0.1151512282	-0.4425470487	0.6581

Parameter	Label	DF	Estimate	Standard Error	Z-Statistics	Prob Z-Statistics
Age_45_49	45 <= Age <= 49	1	-0.1297243991	0.0941435795	-1.3779420728	0.1682
Age_50_54	50 <= Age <= 54	1	-0.2886879689	0.0799123502	-3.6125576110	0.0003
Age_55_59	55 <= Age <= 59	1	-0.1194018032	0.0748245815	-1.5957563782	0.1105
Age_60_64	60 <= Age <= 64	1	-0.0409553130	0.0684168010	-0.5986148490	0.5494
Age_70_74	70 <= Age <= 74	1	0.1509050367	0.0691313976	2.1828726461	0.0290
Age_75_79	75 <= Age <= 79	1	0.2306051077	0.0630540528	3.6572606727	0.0003
Age_80_84	80 <= Age <= 84	1	0.3252825649	0.0637440014	5.1029517696	<.0001
Age_85_89	85 <= Age <= 89	1	0.2983443950	0.0683135695	4.3672786728	<.0001
Age_90Plus	Age >= 90	1	0.2028710218	0.0736907434	2.7530054969	0.0059
MALE	Patient Sex Flag: 1=Male / 0=Female	1	-0.0832272110	0.0638690806	-1.3030907947	0.1925
Age_LT30_MALE	Age < 30 MALE	1	-0.2414909409	0.2014928456	-1.1985087619	0.2307
Age_30_34_MALE	30 <= Age <= 34 MALE	1	0.0176017634	0.2048966380	0.0859055747	0.9315
Age_35_39_MALE	35 <= Age <= 39 MALE	1	0.2908704514	0.1735277146	1.6762189946	0.0937
Age_40_44_MALE	40 <= Age <= 44 MALE	1	-0.1380779265	0.1478267674	-0.9340522619	0.3503
Age_45_49_MALE	45 <= Age <= 49 MALE	1	0.1414693084	0.1217078550	1.1623679376	0.2451
Age_50_54_MALE	50 <= Age <= 54 MALE	1	0.1426107786	0.1016630205	1.4027792792	0.1607
Age_55_59_MALE	55 <= Age <= 59 MALE	1	0.0814360912	0.0950143398	0.8570926387	0.3914
Age_60_64_MALE	60 <= Age <= 64 MALE	1	0.0447927425	0.0896588880	0.4995906536	0.6174
Age_70_74_MALE	70 <= Age <= 74 MALE	1	-0.0298264667	0.0876194500	-0.3404091976	0.7335
Age_75_79_MALE	75 <= Age <= 79 MALE	1	-0.0497012233	0.0842906572	-0.5896409511	0.5554
Age_80_84_MALE	80 <= Age <= 84 MALE	1	0.0833659450	0.0836531480	0.9965667403	0.3190
Age_85_89_MALE	85 <= Age <= 89 MALE	1	0.1805808498	0.0871433337	2.0722279274	0.0382
Age_90Plus_MALE	Age >= 90 MALE	1	0.0780856353	0.1035557713	0.7540442636	0.4508
d_DXCCSR_BLD003_123	Aplastic anemia	1	-0.1411340545	0.0352863259	-3.9996812053	<.0001
d_DXCCSR_BLD006_123	Coagulation and hemorrhagic disorders	1	0.3211802386	0.0357561171	8.9825256517	<.0001

Parameter	Label	DF	Estimate	Standard Error	Z-Statistics	Prob Z-Statistics
d_DXCCSR_CIR005_123	Myocarditis and cardiomyopathy	1	-0.1604277653	0.0583713800	-2.7483976800	0.0060
d_DXCCSR_CIR007_123	Essential hypertension	1	-0.1515383403	0.0267541377	-5.6641085550	<.0001
d_DXCCSR_CIR008_123	Hypertension with complications and secondary hypertension	1	-0.1580983139	0.0284124828	-5.5643962881	<.0001
d_DXCCSR_CIR009_123	Acute myocardial infarction	1	0.2567299912	0.0768847818	3.3391522377	0.0008
d_DXCCSR_CIR011_123	Coronary atherosclerosis and other heart disease	1	0.2439219022	0.0293188739	8.3196204171	<.0001
d_DXCCSR_CIR017_123	Cardiac dysrhythmias	1	0.1529959605	0.0255076914	5.9980324356	<.0001
d_DXCCSR_CIR020_123	Cerebral infarction	1	-0.0750620593	0.0289992812	-2.5884110299	0.0096
d_DXCCSR_CIR024_123	Other and ill-defined cerebrovascular disease	1	-0.4073230733	0.0530187046	-7.6826296721	<.0001
d_DXCCSR_CIR025_123	Sequelae of cerebral infarction and other cerebrovascular disease	1	-0.2191319930	0.0425507734	-5.1498944781	<.0001
d_DXCCSR_CIR031_123	Hypotension	1	0.5237804224	0.0557519708	9.3948324128	<.0001
d_DXCCSR_DIG004_123	Esophageal disorders	1	-0.1361247147	0.0319223625	-4.2642431196	<.0001
d_DXCCSR_DIG019_123	Other specified and unspecified liver disease	1	0.2665464389	0.0571012090	4.6679648892	<.0001
d_DXCCSR_END001_123	Thyroid disorders	1	-0.1665661857	0.0320763015	-5.1928114530	<.0001
d_DXCCSR_END008_123	Malnutrition	1	-0.4791495449	0.0572773367	-8.3654298945	<.0001
d_DXCCSR_END009_123	Obesity	1	-0.3250667382	0.0362906502	-8.9573136966	<.0001
d_DXCCSR_END010_123	Disorders of lipid metabolism	1	-0.2742764238	0.0227136311	-12.0754106675	<.0001
d_DXCCSR_END011_123	Fluid and electrolyte disorders	1	-0.0645801958	0.0238181767	-2.7113828538	0.0067
d_DXCCSR_END016_123	Other specified and unspecified nutritional and metabolic disorders	1	-0.2460719413	0.0422831797	-5.8196177076	<.0001
d_DXCCSR_FAC009_123	Implant, device or graft related encounter	1	-0.1551148247	0.0290836628	-5.3334006092	<.0001
d_DXCCSR_FAC022_123	Acquired absence of limb or organ	1	-0.1743784687	0.0394619810	-4.4188979904	<.0001

Parameter	Label	DF	Estimate	Standard Error	Z-Statistics	Prob Z-Statistics
d_DXCCSR_GEN003_123	Chronic kidney disease	1	0.1443204852	0.0345807939	4.1734289142	<.0001
d_DXCCSR_GEN004_123	Urinary tract infections	1	-0.6302595840	0.0489887495	-12.8653944210	<.0001
d_DXCCSR_GEN012_123	Hyperplasia of prostate	1	-0.2741616246	0.0454190795	-6.0362655431	<.0001
d_DXCCSR_INF002_123	Septicemia	1	0.8371292443	0.0936566828	8.9382756148	<.0001
d_DXCCSR_INF003_123	Bacterial infections	1	-0.4764892297	0.0661652365	-7.2015042171	<.0001
d_DXCCSR_INJ028_123	Adverse effects of drugs and medicaments, initial encounter	1	-0.3390508474	0.0527754542	-6.4244041630	<.0001
d_DXCCSR_MBD002_123	Depressive disorders	1	-0.1635284260	0.0397124024	-4.1178175142	<.0001
d_DXCCSR_MBD005_123	Anxiety and fear-related disorders	1	-0.2185590735	0.0429617818	-5.0872907058	<.0001
d_DXCCSR_MBD017_123	Alcohol-related disorders	1	-0.1071966321	0.0462371855	-2.3184073821	0.0204
d_DXCCSR_MBD024_123	Tobacco-related disorders	1	-0.1922980445	0.0336710816	-5.7110741726	<.0001
d_DXCCSR_MUS006_123	Osteoarthritis	1	-0.1326051662	0.0453569333	-2.9235919719	0.0035
d_DXCCSR_NVS008_123	Paralysis (other than cerebral palsy)	1	-0.2885645403	0.0275492627	-10.4744923157	<.0001
d_DXCCSR_NVS009_123	Epilepsy; convulsions	1	-0.2974259862	0.0330858711	-8.9895165620	<.0001
d_DXCCSR_NVS011_123	Neurocognitive disorders	1	-0.3319446566	0.0352751650	-9.4101517684	<.0001
d_DXCCSR_NVS013_123	Coma; stupor; and brain damage	1	1.4885316943	0.0538679568	27.6329711011	<.0001
d_DXCCSR_NVS016_123	Sleep wake disorders	1	-0.2773625873	0.0403138822	-6.8800763381	<.0001
d_DXCCSR_NVS019_123	Nervous system pain and pain syndromes	1	-0.1989678414	0.0568353786	-3.5007744495	0.0005
d_DXCCSR_NVS020_123	Other nervous system disorders (neither hereditary nor degenerative)	1	0.7066138510	0.0285860593	24.7188268761	<.0001
d_DXCCSR_RSP002_123	Pneumonia (except that caused by tuberculosis)	1	-0.1855073692	0.0647276922	-2.8659660620	0.0042
d_DXCCSR_RSP010_123	Aspiration pneumonitis	1	0.1778207139	0.0511183960	3.4786051165	0.0005
d_DXCCSR_RSP012_123	Respiratory failure; insufficiency; arrest	1	2.1454165179	0.0299757373	71.5717681942	<.0001
d_DXCCSR_SYM005_123	Dysphagia	1	-1.199974969	0.0530830135	-22.6056301063	<.0001

Parameter	Label	DF	Estimate	Standard Error	Z-Statistics	Prob Z-Statistics
d_DXCCSR_SYM010_123	Nervous system signs and symptoms	1	0.2846990659	0.0264924464	10.7464241562	<.0001
d_DXCCSR_SYM012_123	Circulatory signs and symptoms	1	0.2047328540	0.0488705764	4.1892866624	<.0001
d_DXCCSR_SYM016_123	Other general signs and symptoms	1	-0.1744491669	0.0467425403	-3.7321285054	0.0002
DNR	Do not resuscitate flag	1	1.4586462271	0.0314778722	46.3387810544	<.0001

c-statistic=0.851

Table 13. Risk Adjustment Coefficients for IQI 17 – Acute Stroke Mortality Rate Stratum: Ischemic Stroke

Parameter	Label	DF	Estimate	Standard Error	Z-Statistics	Prob Z-Statistics
Intercept	Intercept	1	-4.081622620	0.0579274138	-70.4609847415	<.0001
Age_LT30	Age < 30	1	-1.151598983	0.2337473576	-4.9266823571	<.0001
Age_30_34	30 <= Age <= 34	1	-0.7326134543	0.1977478296	-3.7047863226	0.0002
Age_35_39	35 <= Age <= 39	1	-0.5429089607	0.1593990119	-3.4059744426	0.0007
Age_40_44	40 <= Age <= 44	1	-0.6063806119	0.1245013047	-4.8704759648	<.0001
Age_45_49	45 <= Age <= 49	1	-0.4196311488	0.0944031859	-4.4450952033	<.0001
Age_50_54	50 <= Age <= 54	1	-0.3078393120	0.0908701849	-3.3876822439	0.0007
Age_55_59	55 <= Age <= 59	1	-0.2507410369	0.0687856770	-3.6452506958	0.0003
Age_60_64	60 <= Age <= 64	1	-0.0143105105	0.0580648724	-0.2464572792	0.8053
Age_70_74	70 <= Age <= 74	1	0.1735390154	0.0534047890	3.2495028725	0.0012
Age_75_79	75 <= Age <= 79	1	0.2334043523	0.0530517470	4.3995601593	<.0001
Age_80_84	80 <= Age <= 84	1	0.4028795823	0.0497087491	8.1048022686	<.0001
Age_85_89	85 <= Age <= 89	1	0.5045366924	0.0508358990	9.9248110610	<.0001
Age_90Plus	Age >= 90	1	0.5923519152	0.0523298796	11.3195734442	<.0001
MALE	Patient Sex Flag: 1=Male / 0=Female	1	0.0802748273	0.0516089724	1.5554432399	0.1198
Age_LT30_MALE	Age < 30 MALE	1	0.3278144181	0.2946201935	1.1126678531	0.2659

Parameter	Label	DF	Estimate	Standard Error	Z-Statistics	Prob Z-Statistics
Age_30_34_MALE	30 <= Age <= 34 MALE	1	-0.0614040419	0.2856152715	-0.2149886511	0.8298
Age_35_39_MALE	35 <= Age <= 39 MALE	1	-0.1406028918	0.2121865940	-0.6626379600	0.5076
Age_40_44_MALE	40 <= Age <= 44 MALE	1	0.0624290751	0.1585624921	0.3937190586	0.6938
Age_45_49_MALE	45 <= Age <= 49 MALE	1	0.0567882519	0.1220892742	0.4651371080	0.6418
Age_50_54_MALE	50 <= Age <= 54 MALE	1	0.1409064860	0.1113216619	1.2657598134	0.2056
Age_55_59_MALE	55 <= Age <= 59 MALE	1	0.0490080264	0.0867248668	0.5650977419	0.5720
Age_60_64_MALE	60 <= Age <= 64 MALE	1	-0.1005596009	0.0761110905	-1.3212213922	0.1864
Age_70_74_MALE	70 <= Age <= 74 MALE	1	-0.0448302520	0.0728085204	-0.6157281013	0.5381
Age_75_79_MALE	75 <= Age <= 79 MALE	1	-0.0696820651	0.0671286564	-1.0380375367	0.2993
Age_80_84_MALE	80 <= Age <= 84 MALE	1	-0.0430674512	0.0675424574	-0.6376352422	0.5237
Age_85_89_MALE	85 <= Age <= 89 MALE	1	0.0240635565	0.0679002997	0.3543954383	0.7230
Age_90Plus_MALE	Age >= 90 MALE	1	0.0358769753	0.0708926856	0.5060744274	0.6128
d_DXCCSR_BLD006_123	Coagulation and hemorrhagic disorders	1	0.2466380271	0.0336956449	7.3195817305	<.0001
d_DXCCSR_CIR003_123	Nonrheumatic and unspecified valve disorders	1	-0.1642736064	0.0329923407	-4.9791437291	<.0001
d_DXCCSR_CIR007_123	Essential hypertension	1	-0.2800504554	0.0248887634	-11.2520839403	<.0001
d_DXCCSR_CIR008_123	Hypertension with complications and secondary hypertension	1	-0.2374941228	0.0263180960	-9.0239857295	<.0001
d_DXCCSR_CIR009_123	Acute myocardial infarction	1	0.4724847222	0.0389320222	12.1361464420	<.0001
d_DXCCSR_CIR011_123	Coronary atherosclerosis and other heart disease	1	0.1604310199	0.0213818690	7.5031336121	<.0001
d_DXCCSR_CIR017_123	Cardiac dysrhythmias	1	0.2838361301	0.0190991228	14.8612129123	<.0001
d_DXCCSR_CIR019_123	Heart failure	1	0.1965564988	0.0255580727	7.6905837529	<.0001
d_DXCCSR_CIR021_123	Acute hemorrhagic cerebrovascular disease	1	0.6000685932	0.0333141739	18.0124110439	<.0001
d_DXCCSR_CIR024_123	Other and ill-defined cerebrovascular	1	-0.1399988585	0.0401616236	-3.4858864220	0.0005

Parameter	Label	DF	Estimate	Standard Error	Z-Statistics	Prob Z-Statistics
	disease					
d_DXCCSR_DIG004_123	Esophageal disorders	1	-0.2198993153	0.0261194126	-8.4189992667	<.0001
d_DXCCSR_END001_123	Thyroid disorders	1	-0.1608932232	0.0234221130	-6.8692872955	<.0001
d_DXCCSR_END003_123	Diabetes mellitus with complication	1	-0.0339344164	0.0297471559	-1.1407617082	0.2540
d_DXCCSR_END005_123	Diabetes mellitus, Type 2	1	-0.0417506140	0.0263104402	-1.5868458973	0.1125
d_DXCCSR_END008_123	Malnutrition	1	0.0580062911	0.0368965324	1.5721339464	0.1159
d_DXCCSR_END009_123	Obesity	1	-0.2139456387	0.0301328131	-7.1000884586	<.0001
d_DXCCSR_END010_123	Disorders of lipid metabolism	1	-0.4235105996	0.0192023152	-22.0551842923	<.0001
d_DXCCSR_END011_123	Fluid and electrolyte disorders	1	0.1138905446	0.0224703528	5.0684804728	<.0001
	Other specified and unspecified nutritional and metabolic disorders					
d_DXCCSR_END016_123	Blindness and vision defects	1	-0.1724448533	0.0370285693	-4.6570757773	<.0001
d_DXCCSR_EYE010_123	Implant, device or graft related encounter	1	-0.2226714057	0.0236013932	-9.4346720791	<.0001
d_DXCCSR_FAC022_123	Acquired absence of limb or organ	1	-0.2505162958	0.0343856262	-7.2854946425	<.0001
d_DXCCSR_GEN002_123	Acute and unspecified renal failure	1	0.1589708478	0.0243265722	6.5348642690	<.0001
d_DXCCSR_GEN004_123	Urinary tract infections	1	-0.3769049784	0.0303248646	-12.4289088739	<.0001
d_DXCCSR_GEN012_123	Hyperplasia of prostate	1	-0.3297857130	0.0387949463	-8.5007390054	<.0001
d_DXCCSR_INF002_123	Septicemia	1	0.4180613545	0.0540757175	7.7310366638	<.0001
d_DXCCSR_MBD002_123	Depressive disorders	1	-0.2657354641	0.0325014816	-8.1761031004	<.0001
d_DXCCSR_MBD005_123	Anxiety and fear-related disorders	1	-0.1216452930	0.0357859772	-3.3992446878	0.0007
d_DXCCSR_MBD024_123	Tobacco-related disorders	1	-0.3032355011	0.0291828526	-10.3908793626	<.0001
d_DXCCSR_MUS006_123	Osteoarthritis	1	-0.2824344507	0.0351153721	-8.0430430841	<.0001
d_DXCCSR_NEO070_123	Secondary malignancies	1	0.8560081738	0.0433467271	19.7479309413	<.0001
d_DXCCSR_NVS008_123	Paralysis (other than cerebral palsy)	1	0.4150464813	0.0207248406	20.0265222664	<.0001

Parameter	Label	DF	Estimate	Standard Error	Z-Statistics	Prob Z-Statistics
d_DXCCSR_NVS011_123	Neurocognitive disorders	1	-0.2230158437	0.0253430957	-8.7998659020	<.0001
d_DXCCSR_NVS013_123	Coma; stupor; and brain damage	1	1.8255517650	0.0606864247	30.0817155453	<.0001
d_DXCCSR_NVS016_123	Sleep wake disorders	1	-0.2474136578	0.0327625285	-7.5517265836	<.0001
d_DXCCSR_NVS020_123	Other nervous system disorders (neither hereditary nor degenerative)	1	0.9281077798	0.0207029136	44.8298147038	<.0001
d_DXCCSR_RSP002_123	Pneumonia (except that caused by tuberculosis)	1	0.0653480214	0.0451784579	1.4464420546	0.1481
d_DXCCSR_RSP010_123	Aspiration pneumonitis	1	0.4512078320	0.0398882185	11.3118070787	<.0001
d_DXCCSR_RSP011_123	Pleurisy, pleural effusion and pulmonary collapse	1	0.2387459828	0.0446305585	5.3493837211	<.0001
d_DXCCSR_RSP012_123	Respiratory failure; insufficiency; arrest	1	1.7603501360	0.0273487026	64.3668609496	<.0001
d_DXCCSR_SYM003_123	Shock	1	0.9534993113	0.0693204817	13.7549435237	<.0001
d_DXCCSR_SYM005_123	Dysphagia	1	-0.2215223500	0.0294315617	-7.5266937090	<.0001
d_DXCCSR_SYM010_123	Nervous system signs and symptoms	1	0.0908497172	0.0228166169	3.9817347820	<.0001
d_DXCCSR_SYM017_123	Abnormal findings without diagnosis	1	-0.1124163371	0.0295813191	-3.8002476113	0.0001
TRNSFER	TRANSFER FROM ANOTHER ACUTE CARE HOSPITAL	1	0.5113456015	0.0342114454	14.9466237386	<.0001
DNR	Do not resuscitate flag	1	1.0568854579	0.0296310449	35.6681805470	<.0001

c-statistic=0.865

Table 14. Risk Adjustment Coefficients for IQI 18 – Gastrointestinal Hemorrhage Mortality Rate

Parameter	Label	DF	Estimate	Standard Error	Z-Statistics	Prob Z-Statistics
Intercept	Intercept	1	-4.071452832	0.0628190978	-64.8123417394	<.0001
Age_LT30	Age < 30	1	-1.295591216	0.1927313007	-6.7222667559	<.0001
Age_30_34	30 <= Age <= 34	1	-0.6317649441	0.1438635859	-4.3914166336	<.0001

Parameter	Label	DF	Estimate	Standard Error	Z-Statistics	Prob Z-Statistics
Age_35_39	35 <= Age <= 39	1	-0.8672551336	0.1575958159	-5.5030340043	<.0001
Age_40_44	40 <= Age <= 44	1	-0.4565753752	0.1263683386	-3.6130519747	0.0003
Age_45_49	45 <= Age <= 49	1	-0.4953640263	0.1129542152	-4.3855293548	<.0001
Age_50_54	50 <= Age <= 54	1	-0.3600080747	0.0953503930	-3.7756328347	0.0002
Age_55_59	55 <= Age <= 59	1	-0.2341407152	0.0818834788	-2.8594378083	0.0042
Age_60_64	60 <= Age <= 64	1	-0.0646836168	0.0749802212	-0.8626757268	0.3883
Age_70_74	70 <= Age <= 74	1	0.1264874677	0.0703833157	1.7971228891	0.0723
Age_75_79	75 <= Age <= 79	1	0.3524454856	0.0687157788	5.1290328301	<.0001
Age_80_84	80 <= Age <= 84	1	0.3184869462	0.0678878353	4.6913698866	<.0001
Age_85_89	85 <= Age <= 89	1	0.4510906962	0.0691931524	6.5192967889	<.0001
Age_90Plus	Age >= 90	1	0.4632706729	0.0705371986	6.5677498099	<.0001
MALE	Patient Sex Flag: 1=Male / 0=Female	1	0.0012268636	0.0686573154	0.0178693791	0.9857
Age_LT30_MALE	Age < 30 MALE	1	0.0161369153	0.2485002288	0.0649372250	0.9482
Age_30_34_MALE	30 <= Age <= 34 MALE	1	-0.3001110248	0.1909143812	-1.5719665692	0.1160
Age_35_39_MALE	35 <= Age <= 39 MALE	1	0.4692553985	0.1838693906	2.5521126552	0.0107
Age_40_44_MALE	40 <= Age <= 44 MALE	1	0.0984939083	0.1512836739	0.6510544442	0.5150
Age_45_49_MALE	45 <= Age <= 49 MALE	1	0.2760816185	0.1351206762	2.0432225942	0.0410
Age_50_54_MALE	50 <= Age <= 54 MALE	1	0.0758650018	0.1151360335	0.6589162358	0.5099
Age_55_59_MALE	55 <= Age <= 59 MALE	1	0.1862289046	0.1021869807	1.8224327933	0.0684
Age_60_64_MALE	60 <= Age <= 64 MALE	1	0.0905486256	0.0977393110	0.9264299555	0.3542
Age_70_74_MALE	70 <= Age <= 74 MALE	1	0.0126605879	0.0936115182	0.1352460480	0.8924
Age_75_79_MALE	75 <= Age <= 79 MALE	1	-0.0615063722	0.0914761395	-0.6723761254	0.5013
Age_80_84_MALE	80 <= Age <= 84 MALE	1	0.1288107621	0.0909156919	1.4168155062	0.1565
Age_85_89_MALE	85 <= Age <= 89 MALE	1	0.0942424355	0.0930553880	1.0127563548	0.3112
Age_90Plus_MALE	Age >= 90 MALE	1	0.2323846562	0.0947457991	2.4527172534	0.0142

Parameter	Label	DF	Estimate	Standard Error	Z-Statistics	Prob Z-Statistics
d_DXCCSR_BLD001_123	Nutritional anemia	1	-0.5534286080	0.0342112785	-16.1767882240	<.0001
d_DXCCSR_BLD003_123	Aplastic anemia	1	-0.2150332191	0.0268883450	-7.9972649603	<.0001
d_DXCCSR_BLD004_123	Acute posthemorrhagic anemia	1	-0.3472740161	0.0245486363	-14.1463669004	<.0001
d_DXCCSR_BLD006_123	Coagulation and hemorrhagic disorders	1	0.3978322528	0.0254274270	15.6457927376	<.0001
d_DXCCSR_CIR005_123	Myocarditis and cardiomyopathy	1	0.2903411459	0.0391400893	7.4179990715	<.0001
d_DXCCSR_CIR007_123	Essential hypertension	1	-0.1955919077	0.0274395166	-7.1281105489	<.0001
d_DXCCSR_CIR011_123	Coronary atherosclerosis and other heart disease	1	0.0761863104	0.0277512116	2.7453327663	0.0060
d_DXCCSR_CIR017_123	Cardiac dysrhythmias	1	0.0107639443	0.0257628380	0.4178089494	0.6761
d_DXCCSR_CIR019_123	Heart failure	1	0.1949907398	0.0286095490	6.8155824303	<.0001
d_DXCCSR_CIR031_123	Hypotension	1	0.1803633002	0.0304580754	5.9216906533	<.0001
d_DXCCSR_DIG004_123	Esophageal disorders	1	-0.2771011795	0.0226979204	-12.2082188413	<.0001
d_DXCCSR_DIG007_123	Gastritis and duodenitis	1	-0.6361495052	0.0329847088	-19.2861943582	<.0001
d_DXCCSR_DIG008_123	Other specified and unspecified disorders of stomach and duodenum	1	-0.6799401003	0.0319350837	-21.2913204142	<.0001
d_DXCCSR_DIG010_123	Abdominal hernia	1	-0.5229074367	0.0352742560	-14.8240528842	<.0001
d_DXCCSR_DIG013_123	Diverticulosis and diverticulitis	1	-0.9669237360	0.0357341331	-27.0588272922	<.0001
d_DXCCSR_DIG018_123	Hepatic failure	1	1.0362039983	0.0371548393	27.8888031030	<.0001
d_DXCCSR_DIG019_123	Other specified and unspecified liver disease	1	0.4559168235	0.0309422652	14.7344358940	<.0001
d_DXCCSR_DIG025_123	Other specified and unspecified gastrointestinal disorders	1	-0.1329127391	0.0331170504	-4.0134232152	<.0001
d_DXCCSR_END001_123	Thyroid disorders	1	-0.1349143217	0.0304303716	-4.4335417053	<.0001
d_DXCCSR_END003_123	Diabetes mellitus with complication	1	-0.1544302173	0.0289576395	-5.3329698202	<.0001
d_DXCCSR_END008_123	Malnutrition	1	0.3185774440	0.0308634377	10.3221632842	<.0001

Parameter	Label	DF	Estimate	Standard Error	Z-Statistics	Prob Z-Statistics
d_DXCCSR_END009_123	Obesity	1	-0.1221276290	0.0332492790	-3.6730910414	0.0002
d_DXCCSR_END010_123	Disorders of lipid metabolism	1	-0.2726755838	0.0244551494	-11.1500272935	<.0001
d_DXCCSR_END011_123	Fluid and electrolyte disorders	1	0.4345733617	0.0229636920	18.9243681817	<.0001
d_DXCCSR_END016_123	Other specified and unspecified nutritional and metabolic disorders	1	-0.1572845168	0.0323316369	-4.8647248292	<.0001
d_DXCCSR_FAC009_123	Implant, device or graft related encounter	1	-0.3613469507	0.0286988912	-12.5909725256	<.0001
d_DXCCSR_FAC022_123	Acquired absence of limb or organ	1	-0.3370653666	0.0365541256	-9.2209938293	<.0001
d_DXCCSR_GEN002_123	Acute and unspecified renal failure	1	0.4394316471	0.0250195114	17.5635583047	<.0001
d_DXCCSR_GEN003_123	Chronic kidney disease	1	0.1180372450	0.0287161479	4.1104832484	<.0001
d_DXCCSR_INF003_123	Bacterial infections	1	0.1074927347	0.0356158124	3.0181182899	0.0025
d_DXCCSR_INF007_123	Hepatitis	1	0.1700387669	0.0394468282	4.3105814773	<.0001
d_DXCCSR_MBD002_123	Depressive disorders	1	-0.2229588921	0.0355377865	-6.2738542344	<.0001
d_DXCCSR_MBD005_123	Anxiety and fear-related disorders	1	-0.1045152009	0.0379914135	-2.7510216488	0.0059
d_DXCCSR_MBD024_123	Tobacco-related disorders	1	-0.1330393423	0.0301790204	-4.4083386656	<.0001
d_DXCCSR_NEO070_123	Secondary malignancies	1	0.9979041283	0.0406604599	24.5423718897	<.0001
d_DXCCSR_NVS011_123	Neurocognitive disorders	1	0.0947839006	0.0338665823	2.7987441933	0.0051
d_DXCCSR_NVS020_123	Other nervous system disorders (neither hereditary nor degenerative)	1	0.4185351046	0.0327170009	12.7925877344	<.0001
d_DXCCSR_RSP011_123	Pleurisy, pleural effusion and pulmonary collapse	1	0.4513137121	0.0422576780	10.6800404963	<.0001
d_DXCCSR_RSP012_123	Respiratory failure; insufficiency; arrest	1	0.8906140764	0.0282630423	31.5116138944	<.0001
d_DXCCSR_SYM003_123	Shock	1	1.4500799175	0.0280681133	51.6628924876	<.0001
d_DXCCSR_SYM006_123	Abdominal pain and other digestive/abdomen signs and symptoms	1	0.0947834897	0.0342331251	2.7687653237	0.0056
d_DXCCSR_SYM016_123	Other general signs and symptoms	1	0.2930155912	0.0323115527	9.0684466378	<.0001

Parameter	Label	DF	Estimate	Standard Error	Z-Statistics	Prob Z-Statistics
d_DXCCSR_SYM017_123	Abnormal findings without diagnosis	1	-0.1285809786	0.0339859370	-3.7833583462	0.0002
TRNSFER	TRANSFER FROM ANOTHER ACUTE CARE HOSPITAL	1	0.2884391581	0.0354740401	8.1309926202	<.0001
DNR	Do not resuscitate flag	1	0.9140914250	0.0304581065	30.0114330642	<.0001

c-statistic=0.872

Table 15. Risk Adjustment Coefficients for IQI 19 – Hip Fracture Mortality Rate

Parameter	Label	DF	Estimate	Standard Error	Z-Statistics	Prob Z-Statistics
Intercept	Intercept	1	-4.409069026	0.1168731902	-37.7252389369	<.0001
Age_70_74	70 <= Age <= 74	1	0.0271973337	0.1212151704	0.2243723585	0.8225
Age_75_79	75 <= Age <= 79	1	0.2501032613	0.1104779793	2.2638290722	0.0236
Age_80_84	80 <= Age <= 84	1	0.3023343514	0.1052957315	2.8712878194	0.0041
Age_85_89	85 <= Age <= 89	1	0.5295028579	0.1043610417	5.0737597990	<.0001
Age_90Plus	Age >= 90	1	0.8280982698	0.1002917869	8.2568901748	<.0001
MALE	Patient Sex Flag: 1=Male / 0=Female	1	0.1800206614	0.1414249986	1.2729055204	0.2031
Age_70_74_MALE	70 <= Age <= 74 MALE	1	0.2633415247	0.1797679715	1.4648967917	0.1429
Age_75_79_MALE	75 <= Age <= 79 MALE	1	0.2536140112	0.1612782371	1.5725246984	0.1158
Age_80_84_MALE	80 <= Age <= 84 MALE	1	0.3377469909	0.1538076860	2.1959045069	0.0281
Age_85_89_MALE	85 <= Age <= 89 MALE	1	0.1514083875	0.1537942156	0.9844868799	0.3249
Age_90Plus_MALE	Age >= 90 MALE	1	0.1968231858	0.1493000947	1.3183058334	0.1874
MDC_8	Musculoskeletal And Connective	1	-0.8534272123	0.0581825092	-14.6681059922	<.0001
d_DXCCSR_BLD003_123	Aplastic anemia	1	0.1624619124	0.0368357684	4.4104390758	<.0001
d_DXCCSR_BLD006_123	Coagulation and hemorrhagic disorders	1	0.1482062912	0.0517872523	2.8618295952	0.0042
d_DXCCSR_CIR005_123	Myocarditis and cardiomyopathy	1	0.1693228316	0.0537638894	3.1493783899	0.0016
d_DXCCSR_CIR007_123	Essential hypertension	1	-0.2260977361	0.0434374946	-5.2051283846	<.0001

Parameter	Label	DF	Estimate	Standard Error	Z-Statistics	Prob Z-Statistics
d_DXCCSR_CIR011_123	Coronary atherosclerosis and other heart disease	1	0.2912390772	0.0337069057	8.6403385646	<.0001
d_DXCCSR_CIR014_123	Pulmonary heart disease	1	0.3517179133	0.0483675207	7.2717788271	<.0001
d_DXCCSR_CIR017_123	Cardiac dysrhythmias	1	0.3157820846	0.0333235256	9.4762507424	<.0001
d_DXCCSR_CIR019_123	Heart failure	1	0.5863575943	0.0405230096	14.4697444703	<.0001
d_DXCCSR_DIG004_123	Esophageal disorders	1	-0.1144769985	0.0347140324	-3.2977153828	0.0010
d_DXCCSR_END008_123	Malnutrition	1	0.6094017172	0.0405547513	15.0266417038	<.0001
d_DXCCSR_END010_123	Disorders of lipid metabolism	1	-0.1993950908	0.0314737290	-6.3352865054	<.0001
d_DXCCSR_END011_123	Fluid and electrolyte disorders	1	0.3008307140	0.0323867504	9.2886970702	<.0001
d_DXCCSR_FAC009_123	Implant, device or graft related encounter	1	-0.3082309734	0.0351626401	-8.7658654875	<.0001
d_DXCCSR_FAC022_123	Acquired absence of limb or organ	1	-0.2220488227	0.0498617591	-4.4532889850	<.0001
d_DXCCSR_GEN002_123	Acute and unspecified renal failure	1	0.2259236109	0.0404234963	5.5889181139	<.0001
d_DXCCSR_GEN003_123	Chronic kidney disease	1	0.3020739570	0.0375910741	8.0357894659	<.0001
d_DXCCSR_MBD002_123	Depressive disorders	1	-0.2468117447	0.0460694020	-5.3573898068	<.0001
d_DXCCSR_MUS006_123	Osteoarthritis	1	-0.2573186846	0.0456491382	-5.6368793574	<.0001
d_DXCCSR_MUS013_123	Osteoporosis	1	-0.1780382825	0.0416322963	-4.2764463729	<.0001
d_DXCCSR_RSP008_123	Chronic obstructive pulmonary disease and bronchiectasis	1	0.2577858719	0.0371188886	6.9448704327	<.0001
d_DXCCSR_RSP012_123	Respiratory failure; insufficiency; arrest	1	0.6617765736	0.0508850492	13.0053244431	<.0001
d_DXCCSR_SYM016_123	Other general signs and symptoms	1	0.3379340003	0.0417939647	8.0857129202	<.0001
TRNSFER	TRANSFER FROM ANOTHER ACUTE CARE HOSPITAL	1	0.0578898559	0.0513282458	1.1278362416	0.2594
DNR	Do not resuscitate flag	1	0.7943651759	0.0349033667	22.7589843206	<.0001

c-statistic=0.785

Table 16. Risk Adjustment Coefficients for IQI 20 – Pneumonia Mortality Rate

Parameter	Label	DF	Estimate	Standard Error	Z-Statistics	Prob Z-Statistics
Intercept	Intercept	1	-3.850483773	0.0963781197	-39.9518457795	<.0001
Age_LT30	Age < 30	1	-1.224880460	0.0912602884	-13.4218341926	<.0001
Age_30_34	30 <= Age <= 34	1	-0.8940925273	0.0946156697	-9.4497299423	<.0001
Age_35_39	35 <= Age <= 39	1	-0.6699787313	0.0854887478	-7.8370399428	<.0001
Age_40_44	40 <= Age <= 44	1	-0.6402672901	0.0747856322	-8.5613676204	<.0001
Age_45_49	45 <= Age <= 49	1	-0.4680810356	0.0597737196	-7.8308835195	<.0001
Age_50_54	50 <= Age <= 54	1	-0.2942826925	0.0456441676	-6.4473230235	<.0001
Age_55_59	55 <= Age <= 59	1	-0.2246258251	0.0396386481	-5.6668387055	<.0001
Age_60_64	60 <= Age <= 64	1	-0.0731560113	0.0346714566	-2.1099780209	0.0349
Age_70_74	70 <= Age <= 74	1	0.1050188148	0.0307500850	3.4152365689	0.0006
Age_75_79	75 <= Age <= 79	1	0.2056390742	0.0312071730	6.5894810208	<.0001
Age_80_84	80 <= Age <= 84	1	0.2584618769	0.0307525419	8.4045695321	<.0001
Age_85_89	85 <= Age <= 89	1	0.3248886310	0.0306250900	10.6085771696	<.0001
Age_90Plus	Age >= 90	1	0.4428130786	0.0312004417	14.1925259416	<.0001
MALE	Patient Sex Flag: 1=Male / 0=Female	1	0.0221329567	0.0316643578	0.6989864394	0.4846
Age_LT30_MALE	Age < 30 MALE	1	-0.0166185049	0.1185890852	-0.1401351973	0.8886
Age_30_34_MALE	30 <= Age <= 34 MALE	1	-0.1342976077	0.1266670919	-1.0602407119	0.2890
Age_35_39_MALE	35 <= Age <= 39 MALE	1	-0.1942984001	0.1136462523	-1.7096771448	0.0873
Age_40_44_MALE	40 <= Age <= 44 MALE	1	-0.0600266963	0.0992459007	-0.6048279659	0.5453
Age_45_49_MALE	45 <= Age <= 49 MALE	1	-0.0835747857	0.0818923260	-1.0205447787	0.3075
Age_50_54_MALE	50 <= Age <= 54 MALE	1	-0.0738243777	0.0620179317	-1.1903714902	0.2339
Age_55_59_MALE	55 <= Age <= 59 MALE	1	-0.0316052622	0.0521876789	-0.6056077393	0.5448
Age_60_64_MALE	60 <= Age <= 64 MALE	1	-0.0326803602	0.0462997825	-0.7058426283	0.4803

Parameter	Label	DF	Estimate	Standard Error	Z-Statistics	Prob Z-Statistics
Age_70_74_MALE	70 <= Age <= 74 MALE	1	0.0527483188	0.0409588019	1.2878384214	0.1978
Age_75_79_MALE	75 <= Age <= 79 MALE	1	0.0307997239	0.0417106280	0.7384142941	0.4603
Age_80_84_MALE	80 <= Age <= 84 MALE	1	0.1110633977	0.0409344446	2.7132015314	0.0067
Age_85_89_MALE	85 <= Age <= 89 MALE	1	0.0940789191	0.0395714379	2.3774450514	0.0174
Age_90Plus_MALE	Age >= 90 MALE	1	0.0458358931	0.0407575095	1.1245999484	0.2608
MDC_4	Respiratory System	1	-0.3651060423	0.0857518564	-4.2577042383	<.0001
MDC_18	Infectious and Parasitic	1	0.1219922113	0.0851351363	1.4329243669	0.1519
d_DXCCSR_BLD001_123	Nutritional anemia	1	-0.2067143706	0.0196831221	-10.5021129111	<.0001
d_DXCCSR_BLD004_123	Acute posthemorrhagic anemia	1	0.1202355949	0.0356744691	3.3703541516	0.0008
d_DXCCSR_BLD006_123	Coagulation and hemorrhagic disorders	1	0.3399001801	0.0173841803	19.5522696191	<.0001
d_DXCCSR_CIR005_123	Myocarditis and cardiomyopathy	1	0.1365418946	0.0195084637	6.9991105676	<.0001
d_DXCCSR_CIR007_123	Essential hypertension	1	-0.1907668017	0.0154262245	-12.3663960614	<.0001
d_DXCCSR_CIR008_123	Hypertension with complications and secondary hypertension	1	-0.2151823113	0.0170115353	-12.6491999550	<.0001
d_DXCCSR_CIR009_123	Acute myocardial infarction	1	0.3668707087	0.0220295189	16.6535960474	<.0001
d_DXCCSR_CIR011_123	Coronary atherosclerosis and other heart disease	1	0.0693195297	0.0123514467	5.6122599569	<.0001
d_DXCCSR_CIR013_123	Acute pulmonary embolism	1	0.4615203386	0.0369854946	12.4784146714	<.0001
d_DXCCSR_CIR014_123	Pulmonary heart disease	1	0.0845364652	0.0179160395	4.7184795130	<.0001
d_DXCCSR_CIR017_123	Cardiac dysrhythmias	1	0.2215936061	0.0113565592	19.5123894333	<.0001
d_DXCCSR_CIR018_123	Cardiac arrest and ventricular fibrillation	1	2.3366009121	0.0467016378	50.0325261469	<.0001
d_DXCCSR_CIR019_123	Heart failure	1	0.3620076438	0.0152538666	23.7321888444	<.0001
d_DXCCSR_CIR026_123	Peripheral and visceral vascular disease	1	0.0791032030	0.0206156196	3.8370519328	0.0001
d_DXCCSR_CIR031_123	Hypotension	1	0.1861540288	0.0202857070	9.1766103334	<.0001
d_DXCCSR_CIR033_123	Acute phlebitis; thrombophlebitis and thromboembolism	1	0.1857193481	0.0333758997	5.5644746637	<.0001

Parameter	Label	DF	Estimate	Standard Error	Z-Statistics	Prob Z-Statistics
d_DXCCSR_DIG004_123	Esophageal disorders	1	-0.1714325941	0.0124605135	-13.7580681784	<.0001
d_DXCCSR_DIG010_123	Abdominal hernia	1	-0.2800088044	0.0312228047	-8.9680862177	<.0001
d_DXCCSR_DIG012_123	Intestinal obstruction and ileus	1	0.3844145208	0.0323027598	11.9003615714	<.0001
d_DXCCSR_DIG018_123	Hepatic failure	1	1.0328282156	0.0366742477	28.1622195364	<.0001
d_DXCCSR_DIG019_123	Other specified and unspecified liver disease	1	0.3212296711	0.0231889809	13.8526859876	<.0001
d_DXCCSR_DIG021_123	Gastrointestinal hemorrhage	1	0.3108522401	0.0309506930	10.0434662519	<.0001
d_DXCCSR_DIG025_123	Other specified and unspecified gastrointestinal disorders	1	-0.1004994251	0.0193827965	-5.1849806705	<.0001
d_DXCCSR_EAR004_123	Hearing loss	1	-0.1778921961	0.0286001203	-6.2199806963	<.0001
d_DXCCSR_END001_123	Thyroid disorders	1	-0.1114919642	0.0137244161	-8.1236216813	<.0001
d_DXCCSR_END005_123	Diabetes mellitus, Type 2	1	-0.0851555071	0.0123910191	-6.8723570427	<.0001
d_DXCCSR_END007_123	Nutritional deficiencies	1	-0.2199627292	0.0333981611	-6.5860730583	<.0001
d_DXCCSR_END008_123	Malnutrition	1	0.3485712161	0.0151347796	23.0311392530	<.0001
d_DXCCSR_END009_123	Obesity	1	-0.1947095875	0.0181979487	-10.6995348880	<.0001
d_DXCCSR_END010_123	Disorders of lipid metabolism	1	-0.2046639090	0.0119146059	-17.1775643680	<.0001
d_DXCCSR_END011_123	Fluid and electrolyte disorders	1	0.2101213771	0.0118767814	17.6917777012	<.0001
d_DXCCSR_END015_123	Other specified and unspecified endocrine disorders	1	0.2086179359	0.0307342593	6.7877977432	<.0001
d_DXCCSR_END016_123	Other specified and unspecified nutritional and metabolic disorders	1	-0.0966182729	0.0175034335	-5.5199611617	<.0001
d_DXCCSR_FAC009_123	Implant, device or graft related encounter	1	-0.2079571861	0.0143175566	-14.5246281893	<.0001
d_DXCCSR_FAC022_123	Acquired absence of limb or organ	1	-0.2563173035	0.0190228641	-13.4741699004	<.0001
d_DXCCSR_GEN002_123	Acute and unspecified renal failure	1	0.3645137864	0.0121944219	29.8918464762	<.0001
d_DXCCSR_GEN003_123	Chronic kidney disease	1	0.1288270511	0.0143372288	8.9854917697	<.0001
d_DXCCSR_GEN004_123	Urinary tract infections	1	-0.0758343226	0.0144984399	-5.2305160444	<.0001

Parameter	Label	DF	Estimate	Standard Error	Z-Statistics	Prob Z-Statistics
d_DXCCSR_GEN006_123	Other specified and unspecified diseases of kidney and ureters	1	-0.1078018973	0.0253415404	-4.2539599258	<.0001
d_DXCCSR_GEN012_123	Hyperplasia of prostate	1	-0.2031872370	0.0182523617	-11.1321066694	<.0001
d_DXCCSR_INF004_123	Fungal infections	1	0.2022610508	0.0261947719	7.7214282107	<.0001
d_DXCCSR_INF008_123	Viral infection	1	-0.1467350816	0.0220040723	-6.6685420642	<.0001
d_DXCCSR_INJ020_123	Effect of foreign body entering opening, initial encounter	1	0.2305051368	0.0386189765	5.9687013392	<.0001
d_DXCCSR_INJ028_123	Adverse effects of drugs and medicaments, initial encounter	1	-0.3264059502	0.0256450817	-12.7278186913	<.0001
d_DXCCSR_MBD002_123	Depressive disorders	1	-0.0990258863	0.0155188334	-6.3810135679	<.0001
d_DXCCSR_MBD024_123	Tobacco-related disorders	1	-0.3270997865	0.0191803706	-17.0538825289	<.0001
d_DXCCSR_MUS006_123	Osteoarthritis	1	-0.1083030111	0.0194441410	-5.5699560802	<.0001
d_DXCCSR_MUS010_123	Musculoskeletal pain, not low back pain	1	-0.2434629091	0.0325714076	-7.4747432605	<.0001
d_DXCCSR_MUS011_123	Spondylopathies/spondyloarthropathy (including infective)	1	-0.1651087970	0.0293833254	-5.6191324324	<.0001
d_DXCCSR_MUS033_123	Gout	1	-0.1622944182	0.0288187864	-5.6315493602	<.0001
d_DXCCSR_NE0022_123	Respiratory cancers	1	0.4348705507	0.0222433989	19.5505440401	<.0001
d_DXCCSR_NE0070_123	Secondary malignancies	1	0.9016781570	0.0208520875	43.2416254240	<.0001
d_DXCCSR_NE0074_123	Conditions due to neoplasm or the treatment of neoplasm	1	0.4119987863	0.0267698699	15.3903918180	<.0001
d_DXCCSR_NVS009_123	Epilepsy; convulsions	1	-0.0744165618	0.0219249186	-3.3941545293	0.0007
d_DXCCSR_NVS013_123	Coma; stupor; and brain damage	1	0.9771969782	0.0373859580	26.1380751415	<.0001
d_DXCCSR_NVS015_123	Polyneuropathies	1	-0.1229044750	0.0238554692	-5.1520460082	<.0001
d_DXCCSR_NVS016_123	Sleep wake disorders	1	-0.2498158271	0.0175181106	-14.2604320877	<.0001
d_DXCCSR_NVS019_123	Nervous system pain and pain syndromes	1	-0.1798663667	0.0201097249	-8.9442479854	<.0001
d_DXCCSR_NVS020_123	Other nervous system disorders (neither	1	0.2935448705	0.0130779727	22.4457473852	<.0001

Parameter	Label	DF	Estimate	Standard Error	Z-Statistics	Prob Z-Statistics
	hereditary nor degenerative)					
d_DXCCSR_RSP002_123	Pneumonia (except that caused by tuberculosis)	1	-0.1528016300	0.0302990828	-5.0431107516	<.0001
d_DXCCSR_RSP008_123	Chronic obstructive pulmonary disease and bronchiectasis	1	-0.1959027777	0.0119118682	-16.4460162734	<.0001
d_DXCCSR_RSP009_123	Asthma	1	-0.3710731353	0.0257746452	-14.3968280419	<.0001
d_DXCCSR_RSP010_123	Aspiration pneumonitis	1	0.2491532466	0.0303844351	8.2000289133	<.0001
d_DXCCSR_RSP011_123	Pleurisy, pleural effusion and pulmonary collapse	1	0.2451916932	0.0140238537	17.4839026643	<.0001
d_DXCCSR_RSP012_123	Respiratory failure; insufficiency; arrest	1	0.6400431152	0.0137275589	46.6246853881	<.0001
d_DXCCSR_RSP016_123	Other specified and unspecified lower respiratory disease	1	0.4534457899	0.0184525720	24.5735819136	<.0001
d_DXCCSR_SKN003_123	Pressure ulcer of skin	1	0.2235431226	0.0184574001	12.1113007116	<.0001
d_DXCCSR_SKN004_123	Non-pressure ulcer of skin	1	0.1372028463	0.0339707538	4.0388519768	<.0001
d_DXCCSR_SYM003_123	Shock	1	0.9633913180	0.0383495234	25.1213374339	<.0001
d_DXCCSR_SYM005_123	Dysphagia	1	-0.1503825608	0.0171716413	-8.7576113418	<.0001
d_DXCCSR_SYM007_123	Malaise and fatigue	1	-0.1744463942	0.0296934126	-5.8749190100	<.0001
d_DXCCSR_SYM010_123	Nervous system signs and symptoms	1	0.1720518330	0.0207288777	8.3001036095	<.0001
d_DXCCSR_SYM011_123	Genitourinary signs and symptoms	1	-0.1710921050	0.0265037687	-6.4553878080	<.0001
d_DXCCSR_SYM013_123	Respiratory signs and symptoms	1	-0.2221673498	0.0215012531	-10.3327628976	<.0001
d_DXCCSR_SYM016_123	Other general signs and symptoms	1	0.3493472546	0.0143766142	24.2996890005	<.0001
d_DXCCSR_SYM017_123	Abnormal findings without diagnosis	1	-0.1312445076	0.0161431654	-8.1300355136	<.0001
TRNSFER	TRANSFER FROM ANOTHER ACUTE CARE HOSPITAL	1	0.4866524433	0.0264788993	18.3788773798	<.0001
DNR	Do not resuscitate flag	1	0.8888825959	0.0155040613	57.3322420093	<.0001

c-statistic=0.835

Table 17. Risk Adjustment Coefficients for IQI 30 – Percutaneous Coronary Intervention (PCI) Mortality Rate

Parameter	Label	DF	Estimate	Standard Error	Z-Statistics	Prob Z-Statistics
Intercept	Intercept	1	-3.306363081	0.0940495949	-35.1555270833	<.0001
Age_40_44	40 <= Age <= 44	1	-0.8876405154	0.1789341345	-4.9607109224	<.0001
Age_45_49	45 <= Age <= 49	1	-0.7431266960	0.1340382089	-5.5441407513	<.0001
Age_50_54	50 <= Age <= 54	1	-0.5988588966	0.0985708747	-6.0754142483	<.0001
Age_55_59	55 <= Age <= 59	1	-0.3169626111	0.0767491788	-4.1298501938	<.0001
Age_60_64	60 <= Age <= 64	1	-0.2027291553	0.0688407266	-2.9449014456	0.0032
Age_70_74	70 <= Age <= 74	1	0.2179057867	0.0613820397	3.5499925965	0.0004
Age_75_79	75 <= Age <= 79	1	0.4867535958	0.0617147439	7.8871524836	<.0001
Age_80_84	80 <= Age <= 84	1	0.5650453820	0.0643014570	8.7874429083	<.0001
Age_85_89	85 <= Age <= 89	1	0.9320060433	0.0644389255	14.4634013636	<.0001
Age_90Plus	Age >= 90	1	1.2850055402	0.0800170265	16.0591513642	<.0001
MALE	Patient Sex Flag: 1=Male / 0=Female	1	-0.2739523887	0.0589022613	-4.6509655640	<.0001
Age_40_44_MALE	40 <= Age <= 44 MALE	1	0.0226622873	0.2100305642	0.1078999496	0.9141
Age_45_49_MALE	45 <= Age <= 49 MALE	1	0.0082211976	0.1550912687	0.0530087711	0.9577
Age_50_54_MALE	50 <= Age <= 54 MALE	1	0.0198262940	0.1183397214	0.1675371021	0.8669
Age_55_59_MALE	55 <= Age <= 59 MALE	1	-0.0576514985	0.0940491741	-0.6129931394	0.5399
Age_60_64_MALE	60 <= Age <= 64 MALE	1	0.0384306063	0.0851479940	0.4513389516	0.6517
Age_70_74_MALE	70 <= Age <= 74 MALE	1	-0.0129770289	0.0787347384	-0.1648196103	0.8691
Age_75_79_MALE	75 <= Age <= 79 MALE	1	-0.0245918800	0.0777693666	-0.3162155104	0.7518
Age_80_84_MALE	80 <= Age <= 84 MALE	1	0.1170139516	0.0844264612	1.3859866916	0.1658
Age_85_89_MALE	85 <= Age <= 89 MALE	1	-0.0265105384	0.0882257917	-0.3004851293	0.7638
Age_90Plus_MALE	Age >= 90 MALE	1	-0.0367500895	0.1131865841	-0.3246859139	0.7454
MDC_1	Nervous System	1	0.8956033140	0.1360086414	6.5849000811	<.0001

Parameter	Label	DF	Estimate	Standard Error	Z-Statistics	Prob Z-Statistics
MDC_5	Circulatory System	1	-0.2250313203	0.0479712545	-4.6909617566	<.0001
MDC_6	Digestive System	1	1.1122444307	0.1368171698	8.1294214212	<.0001
MDC_7	Hepatobiliary System And Pancreas	1	1.3698493751	0.2205504658	6.2110472989	<.0001
MDC_17	Myeloproliferative DDs	1	2.1390780316	0.3414136369	6.2653561551	<.0001
d_DXCCSR_CIR007_123	Essential hypertension	1	-0.2417880731	0.0270455929	-8.9400174654	<.0001
d_DXCCSR_CIR009_123	Acute myocardial infarction	1	0.4893753663	0.0304399594	16.0767417515	<.0001
d_DXCCSR_CIR011_123	Coronary atherosclerosis and other heart disease	1	-0.4954679841	0.0342823732	-14.4525579309	<.0001
d_DXCCSR_CIR018_123	Cardiac arrest and ventricular fibrillation	1	0.5813835661	0.0474114686	12.2625091081	<.0001
d_DXCCSR_DIG004_123	Esophageal disorders	1	-0.2799357329	0.0278688126	-10.0447671300	<.0001
d_DXCCSR_END003_123	Diabetes mellitus with complication	1	0.1483363708	0.0265403621	5.5890861729	<.0001
d_DXCCSR_END009_123	Obesity	1	-0.1695768754	0.0275095453	-6.1642922074	<.0001
d_DXCCSR_END010_123	Disorders of lipid metabolism	1	-0.5793326250	0.0233819595	-24.7769065309	<.0001
d_DXCCSR_END011_123	Fluid and electrolyte disorders	1	0.4813401808	0.0249440158	19.2968198909	<.0001
d_DXCCSR_FAC009_123	Implant, device or graft related encounter	1	-0.1600522809	0.0248067662	-6.4519607165	<.0001
d_DXCCSR_GEN002_123	Acute and unspecified renal failure	1	0.2670606596	0.0256645828	10.4058056149	<.0001
d_DXCCSR_GEN003_123	Chronic kidney disease	1	0.1532886792	0.0294835438	5.1991266849	<.0001
d_DXCCSR_MBD024_123	Tobacco-related disorders	1	-0.1586790752	0.0289384434	-5.4833313980	<.0001
d_DXCCSR_RSP012_123	Respiratory failure; insufficiency; arrest	1	0.6481725992	0.0278797541	23.2488635369	<.0001
d_DXCCSR_SYM003_123	Shock	1	0.4315757413	0.0473707301	9.1105993232	<.0001
d_IQ30_PRCCSR_CAR004_123	Percutaneous coronary interventions (PCI)	1	-0.3502648435	0.0562980748	-6.2216131682	<.0001
d_IQ30_PRCCSR_CAR017_123	Pericardial procedures	1	2.1434219959	0.1075189449	19.9352960290	<.0001
d_IQ30_PRCCSR_CAR024_123	Venous and arterial catheter placement	1	0.9962052995	0.0329985983	30.1893216502	<.0001

Parameter	Label	DF	Estimate	Standard Error	Z-Statistics	Prob Z-Statistics
d_IQ30_PRCCSR_CAR027_123	Heart assist device procedures	1	1.6115365399	0.0361806128	44.5414384665	<.0001
TRNSFER	TRANSFER FROM ANOTHER ACUTE CARE HOSPITAL	1	0.0827838108	0.0310497749	2.6661646087	0.0077
CSHOCKANOBDD	Cardiogenic shock, anoxic brain injury, or cardiac arrest	1	1.2866148095	0.0544768445	23.6176456359	<.0001

c-statistic=0.900

Table 18. Risk Adjustment Coefficients for IQI 31 – Carotid Endarterectomy Mortality Rate

Parameter	Label	DF	Estimate	Standard Error	Z-Statistics	Prob Z-Statistics
Intercept	Intercept	1	-4.423094888	0.3572117027	-12.3822787853	<.0001
Age_LT60	Age<60	1	-0.5032282584	0.5032568224	-0.9999432417	0.3173
Age_60_64	60 <= Age <= 64	1	-0.1361788371	0.4852634848	-0.2806286510	0.7790
Age_70_74	70 <= Age <= 74	1	0.3297895839	0.3745027029	0.8806066854	0.3785
Age_75_79	75 <= Age <= 79	1	0.5729496853	0.3633074016	1.5770382957	0.1148
Age_80_84	80 <= Age <= 84	1	0.4205644325	0.3874458827	1.0854791631	0.2777
Age_85_89	85 <= Age <= 89	1	0.9702441323	0.4232159372	2.2925510291	0.0219
Age_90Plus	Age >= 90	1	1.4371390394	0.3940819936	3.6468020942	0.0003
MALE	Patient Sex Flag: 1=Male / 0=Female	1	-0.0167047020	0.3360740539	-0.0497054200	0.9604
Age_LT60_MALE	Age<=60 MALE	1	0.7094788308	0.5995004855	1.1834499686	0.2366
Age_60_64_MALE	60 <= Age <= 64 MALE	1	0.0944548973	0.5720578284	0.1651142464	0.8689
Age_70_74_MALE	70 <= Age <= 74 MALE	1	0.0808943999	0.4432086204	0.1825199153	0.8552
Age_75_79_MALE	75 <= Age <= 79 MALE	1	-0.2036552012	0.4469002088	-0.4557062118	0.6486
Age_80_84_MALE	80 <= Age <= 84 MALE	1	0.1032087813	0.4846881629	0.2129385226	0.8314
Age_85_89_MALE	85 <= Age <= 89 MALE	1	0.2371812858	0.5232251704	0.4533063377	0.6503

Parameter	Label	DF	Estimate	Standard Error	Z-Statistics	Prob Z-Statistics
MDC_1	Nervous System	1	-1.537632604	0.1997511926	-7.6977392899	<.0001
d_DXCCSR_BLD006_123	Coagulation and hemorrhagic disorders	1	0.5702431957	0.2388486692	2.3874664971	0.0170
d_DXCCSR_CIR009_123	Acute myocardial infarction	1	0.3971602916	0.2929478841	1.3557370208	0.1752
d_DXCCSR_CIR014_123	Pulmonary heart disease	1	0.5766785326	0.2782779858	2.0723110057	0.0382
d_DXCCSR_CIR019_123	Heart failure	1	0.2850958503	0.1794261196	1.5889317060	0.1121
d_DXCCSR_CIR023_123	Occlusion or stenosis of precerebral or cerebral arteries without infarction	1	-0.6549056090	0.1744668828	-3.7537531400	0.0002
d_DXCCSR_CIR025_123	Sequelae of cerebral infarction and other cerebrovascular disease	1	0.7512268224	0.1930991825	3.8903676992	0.0001
d_DXCCSR_END010_123	Disorders of lipid metabolism	1	-0.5871689859	0.1256645865	-4.6725095933	<.0001
d_DXCCSR_END011_123	Fluid and electrolyte disorders	1	0.6724782833	0.1862900164	3.6098460676	0.0003
d_DXCCSR_GEN003_123	Chronic kidney disease	1	0.4135018399	0.1494153505	2.7674655828	0.0056
d_DXCCSR_NVS008_123	Paralysis (other than cerebral palsy)	1	0.9372898285	0.2078829129	4.5087391530	<.0001
d_DXCCSR_NVS011_123	Neurocognitive disorders	1	0.4931511160	0.2509179576	1.9653878933	0.0494
d_DXCCSR_NVS020_123	Other nervous system disorders (neither hereditary nor degenerative)	1	0.6551297038	0.1921565231	3.4093544856	0.0007
d_DXCCSR_RSP012_123	Respiratory failure; insufficiency; arrest	1	0.5488294550	0.2636547915	2.0816213950	0.0374
d_IQ31_PRCCSR_CAR012_123	Vessel repair and replacement	1	1.4541776543	0.3488280853	4.1687516452	<.0001
d_IQ31_PRCCSR_CAR020_123	Saphenous vein harvest and other therapeutic vessel removal	1	0.8954337644	0.2566411991	3.4890491773	0.0005

Parameter	Label	DF	Estimate	Standard Error	Z-Statistics	Prob Z-Statistics
d_IQ31_PRCCSR_CAR024_123	Venous and arterial catheter placement	1	0.7886379054	0.1976287853	3.9905012028	<.0001
TRNSFER	TRANSFER FROM ANOTHER ACUTE CARE HOSPITAL	1	0.3937540032	0.2041856265	1.9284119546	0.0538

c-statistic=0.851

Composite Weights

To utilize the IQI 90 and IQI 91 composites, users must use the denominator weights below when using the AHRQ QI™ software to compute the composite measure using their own data. These weights are included in the IQI_Composite_Wt_v2021.sas macro. Tables 19 and 20 provide the denominator weights for the composite measures. The sum of the weights for the indicators included in the same composite always equals one.

Table 19. Denominator Weights for IQI 90, v2021

INDICATOR	WEIGHT
IQI 08 Esophageal Resection Mortality Rate	0.0075
IQI 09 Pancreatic Resection Mortality Rate	0.0259
IQI 11 Abdominal Aortic Aneurysm (AAA) Repair Mortality Rate	0.0474
IQI 12 Coronary Artery Bypass Graft (CABG) Mortality Rate	0.2454
IQI 30 Percutaneous Coronary Intervention (PCI) Mortality Rate	0.5864
IQI 31 Carotid Endarterectomy Mortality Rate	0.0874
SUM	1.0000

Source: Agency for Healthcare Research and Quality, Healthcare Cost and Utilization Project, State Inpatient Databases (SID), 2019.

Table 20. NQF Denominator Weights for IQI 91, v2021

INDICATOR	WEIGHT
IQI 15 Acute Myocardial Infarction (AMI) Mortality Rate	0.1251
IQI 16 Heart Failure Mortality Rate	0.2688
IQI 17 Acute Stroke Mortality Rate	0.1420
IQI 18 Gastrointestinal Hemorrhage Mortality Rate	0.1193
IQI 19 Hip Fracture Mortality Rate	0.0616
IQI 20 Pneumonia Mortality Rate	0.2832
SUM	1.0000

Source: Agency for Healthcare Research and Quality, Healthcare Cost and Utilization Project, State Inpatient Databases (SID), 2019.

Appendix: Additional Tables

Table A.1. Population Age Categories

POPCAT	AGE RANGE
Age_LT30	< 30
Age_30_34	30 - 34
Age_35_39	35 - 39
Age_40_44	40 - 44
Age_45_49	45 - 49
Age_50_54	50 - 54
Age_55_59	55 - 59
Age_60_64	60 - 64
Age_65_69	65 - 69
Age_70_74	70 - 74
Age_75_79	75 - 79
Age_80_84	80 - 84
Age_85_89	85 - 89
Age_90Plus	90 plus

Table A.2. Major Diagnostic Categories (MDC)

MDC	DESCRIPTION
1	DISEASES & DISORDERS OF THE NERVOUS SYSTEM
2	DISEASES & DISORDERS OF THE EYE
3	DISEASES & DISORDERS OF THE EAR, NOSE, MOUTH & THROAT
4	DISEASES & DISORDERS OF THE RESPIRATORY SYSTEM
5	DISEASES & DISORDERS OF THE CIRCULATORY SYSTEM
6	DISEASES & DISORDERS OF THE DIGESTIVE SYSTEM
7	DISEASES & DISORDERS OF THE HEPATOBILIARY SYSTEM & PANCREAS
8	DISEASES & DISORDERS OF THE MUSCULOSKELETAL SYSTEM & CONNECTIVE TISSUE
9	DISEASES & DISORDERS OF THE SKIN, SUBCUTANEOUS TISSUE & BREAST
10	ENDOCRINE, NUTRITIONAL & METABOLIC DISEASES & DISORDERS
11	DISEASES & DISORDERS OF THE KIDNEY & URINARY TRACT
12	DISEASES & DISORDERS OF THE MALE REPRODUCTIVE SYSTEM
13	DISEASES & DISORDERS OF THE FEMALE REPRODUCTIVE SYSTEM
14	PREGNANCY, CHILDBIRTH & THE Puerperium
15	NEWBORNS & OTHER NEONATES WITH CONDTN ORIG IN PERINATAL PERIOD
16	DISEASES & DISORDERS OF BLOOD, BLOOD FORMING ORGANS, IMMUNOLOGIC
17	MYELOPROLIFERATIVE DISEASES & DISORDERS, POORLY DIFFERENTIATED

MDC	DESCRIPTION
18	INFECTIOUS & PARASITIC DISEASES, SYSTEMIC OR UNSPECIFIED SITES
19	MENTAL DISEASES & DISORDERS
20	ALCOHOL/DRUG USE & ALCOHOL/DRUG INDUCED ORGANIC MENTAL DISORDERS
21	INJURIES, POISONINGS & TOXIC EFFECTS OF DRUGS
22	BURNS
23	FACTORS INFLUENCING HEALTH STATUS & OTHER CONTACTS WITH HEALTH
24	MULTIPLE SIGNIFICANT TRAUMA
25	HUMAN IMMUNODEFICIENCY VIRUS INFECTIONS

Table A.3. Categorical Variable Definitions

CATEGORY	DESCRIPTION	DEFINITION
TRNSFER	Transfer-in	If admission type (ATYPE) not equal to '4' (newborn) and - admission source (ASOURCE) equal to '2' (Another Hospital) or - point of origin (POINTOFORIGINUB04) equal to '4' (Transfer from a Hospital), then TRNSFER=1
MRTAMINSTD*	Non-STEMI AMI	Category equals 1 for discharges with any listed diagnosis code for acute non-ST elevation myocardial infarction (NSTEMI) (MRTAMINSTD) present on admission. Category equals 0 for discharges with no listed MRTAMINSTD diagnosis codes or if the diagnosis code is not present on admission.
CSHOCKANOXBDD*	Cardiogenic shock, anoxic brain injury, or cardiac arrest	Category equals 1 for discharges with any listed diagnosis code for cardiogenic shock, cardiac arrest, and anoxic brain damage (CSHOCKANOXBDD) present on admission. Category equals 0 for discharges with no listed CSHOCKANOXBDD diagnosis code or if the diagnosis code is not present on admission.

*Refer to “[All ICD-10-CM/PCS coding revisions in MS Excel format](#)” for a full detailed list of codes in MRTAMINSTD, CSHOCKANOXBDD and other code lists in this document.

Table A.4. Do Not Resuscitate (DNR) Status Diagnosis Codes

Diagnosis Code	Description
Z66	Do not resuscitate